BUSINÉSS WEEK

A McGRAW-HILL PUBLICATION

FIFTY CENTS

SEPT. 3, 1960



CH2 = CHCHO

150125100

. 50 . 25

PETROCHEMICALS

The oil companies stage a major invasion of a changing industry
(Research) (Special Report)

CH'NZ CO'H CH'NZ CHILLIAN C'H'NZ CH'HZ C'H'NZ C'H'N



MANHANDLING GIANT LOGS PUTS PRESSURE ON BEARINGS

Great logs, six-to-a-truckload size . . . washboard trails, mostly up-and-down . . . heavy punishment for trucks and equipment, day-in and day-out.

Here, rugged Federal-Mogul engine bearings and formed bushings play a vital part in keeping heavy-laden vehicles rolling. Here, long service life is essential and F-M products deliver it—dependably!

F-M bearings keep other industries on the move, too. For

example, road and construction machinery. F-M sleeve bearings, bushings, precision thrust washers and spacers are original equipment on almost every kind of vehicle and machinery. Other divisions of Federal-Mogul-Bower Bearings, Inc. provide all types of tapered, cylindrical, journal roller bearings and ball bearings. For a broad line to fill almost any requirements, and for experienced engineering service, call Federal-Mogul-Bower Bearings, Inc.

FEDERAL-MOGUL-BOWER BEARINGS, INC.

roller, ball and sleeve bearings

FEDERAL-MOGUL DIVISION

BOWER ROLLER BEARING DIVISION

Tapered, cylindrical and journal roller bearings for every industry—missiles, aircraft, automotive, construction, and farm equipment, to name a few.

BEARINGS COMPANY OF AMERICA DIVISION

Radial and clutch bearings for the automotive industry, earth-moving equipment, farm tractors, and specialty ball bearings for farm implements.

THE THREE BEARING DIVISIONS

of Federal-Mogul-Bower Bearings, Inc., offer longlived bearings for nearly any application in a complete range of sizes and types.







In BUSINESS this WEEK September 3, 1960

	September 0, 1700					
GENERAL BUSINESS	THIS YEAR GOOD, NEXT YEAR LOWER. Detroit is optimistic on 1961 sales, but it looks like a drop from 1960	23				
BUSINESS OUTLOOK 19	MORE BREADWINNERS IDLED. The number of workers drawing unemploment compensation is up from a year ago					
WASHINGTON OUTLOOK 39 INTERNATIONAL OUTLOOK 81 PERSONAL BUSINESS 101	JAPAN'S WINKIE DOLL SETS OFF A NEW CRAZE. Block-faced vinyl toy is practically an epidemic in Japan, will invade the U.S. this fall	26				
FIGURES OF THE WEEK 2 READERS REPORT 5	GROUND RULES SET FOR TV DEBATE. Nixon and Kennedy will face each other on the screen three, and perhaps four, times this fall. It may be the standard campaign pattern in the future	28				
	ASIAN RIVALS END OLD DISPUTE. World Bank mediation averts threat of war over water rights between India and Pakistan, opens way for billion-dollar irrigation project	29				
	ECONOMISTS SING VARIATIONS ON A THEME: RECESSION IN 1961.	30				
	ROLLING ADS FOR STAINLESS. Allegheny Ludlum's two 1960 Thunderbirds and two 1936 Fords are display pieces for stainless steel	34				
1	IN BUSINESS. Airlines' bid for coach fare increase; a crop of morger plans; Chrysler's \$30-million libel suit against Sol Dann	36				
SPECIAL REPORT:	PETROCHEMICALS FACE NEW CHALLENGES. The industry must learn to live with slower growth and a burst of competition from oil companies	50				
THE DEPARTMENTS						
BUSINESS ABROAD:	In Business Abroad. Russian pacts with Hana and UAR; RemRand plans European typewriter plant; Soviet airliners grounded; India may make small cars	85				
ECONOMICS:	Why the inventory Slowdown. The rate of inventory buildup is on a new down-trend	74				
FINANCE:	In Finance. Prime rate and business borrowing, equity securities, Zeckendorf sales in New York and Los Angeles.	43				
	Flight of Capital Abroad Worries Bankers. Funds fleeing for more safety or better earnings are beginning to embarrass money managers and bankers in Britain, Germany, Switzerland	44				
LABOR:	Head-on Clash on Job Security. Pennsylvania RR-TWU dispute highlights fundamental issues in this year's rail labor troubles	94				
	In Labor. New high in cost of living; latest chapter in Kohler strike; UAW setback in vote at A. O. Smith; trucking settlement in New York; new GE offer	98				
MANAGEMENT:	Personal Control Works at Friden. Pres. Walter Johnson relies on rugged individualism rather than organization charts to run a company with almost 4,000 workers	114				
MARKETING:	TV Abroad Thrives on U.S. Ways. The bigger it gets, the more it looks like the Made in U.S. product. Set ownership is gaining far faster than in the States	105				
	Here's a Realistic Way to Play Wholesaler. Amstan's game for branch managers has the real customers built in; its goal is to improve profit margins	108				
THE MARKETS:	Disorder in Stocks. Spurt by two stocks overwhelms the specialists and sets off a double investigation	87				
	Wall Street Talks	90				
*	In the Markets. Confusion on Wall Street; Murchison's purchase of Alleghany stock; Oppenheimer Fund; Anderson-Prichard Oil Corp. deal	93				
	BUSINESS WEEK is published weekly by McGraw-Hill Publishing Co., Inc., 330 W. 42nd St., N. Y. 36, N. Y. Second Class Postage Poid at N. Y. 1, N. Y., and at NUMBE	R 1618				

FIGURES of the WEEK

1947-49=100					170
160	M	-			160
150			1		150
W					100
140	<u> </u>				140
130					130
120					120
	1				1
JFMAMJJASONDJFMAMJJASO	NDJ	FMA	M J J A	SON	D 110
1958 1959	1		1960		
	1953-55	Year	Month	Week	§ Late
DUCINICO WITEL INDEV	Average	Ago	Ago	Ago	Weel
BUSINESS WEEK INDEX (chart)	133.3	149.9	148.5	146.1 r	145.3
PRODUCTION					
Steel inget (thous, of tons)	2.032	332	1,537	1.547r	1,53
Automobiles	125,553	18,335	107,019	47,437r	39,1
Engineering const. awards (Eng. News-Rec. 4-wk. daily av. in thous.)	\$52,412	\$65,558	\$85,343	\$77,451	\$79,2
Electric power (millions of kilowatt-hours)	10,819 6,536	6,821	14,746 6,821	14,453 6,842	14,60
Bitumineus coal (daily av., thous. of tons)	1,455	1,187	1,321	1.339r	1,33
Paperbeard (tons)	247,488	323,961	323,825	314,607	313,47
RADE					
Carloadings: mfrs., miscellaneous and I.c.I. (daily av., thous. of cars)	70	55	54	54	5
Carleadings: all others (daily av., thous. of cars)	47	35	. 49	46	1
Department store sales index (1947-49 = 100, not seasonally adjusted)	121	132	120	131	13
Business failures (Dun & Bradstreet, number)	198	257	293	279	31
PRICES					
Industrial raw materials, daily index (BLS, 1947-49 = 100)	89.2	93.1	90.4	91.5	91.
Foodstuffs, daily index (BLS, 1947-49 = 100)	90.5	78.5	78.4	77.3	76.
Print cloth (spot and nearby, yd.)	19.8∉ 143.9	19.5¢ 186.7	20.2¢ 186.2	19.8∉ 186.2	19.5
Scrap steel composite (Iron Age, ton)	\$36.10	\$41.17	\$31.83	\$32.50	\$32.5
Copper (electrolytic, delivered price, E&MJ, lb.)	32.394∉	31.585∉	33.000∉	33.000∉	33.000
Aluminum, primary pig (U. S. del., E&MJ, lb.)	20.6∉	24.7∉	26.0¢	26.0∉	26.0
Aluminum, secondary alloy #380, 1% zinc (U. S. del., E&MJ, ib.)	\$2.34	23.75¢ \$1.99	24.00¢ \$1.90	23.99¢	24.01
Cotton, daily price (middling, 1 in., 14 designated markets, lb.)	34.57€	31.83∉	31.27¢	\$1.93 30.60¢	\$1.9
Wool tops (Boston, Ib.)	\$1.96	\$1.94	\$1.65	\$1.64	\$1.6
INANCE					
500 stocks composite, price index (5&P's, 1941-43 = 10)	31.64	59.30	55.07	57.37	56.7
Medium grade corporate band yield (Baa issue Moody's)	3.59%	5.12%	5.15%	5.04%	5.01%
Prime commercial paper, 4 to 6 months, N. Y. City (prevailing rate)	2-21/6 %	41/4%	3%%	3%%	31/49
ANKING (Millions of Dollars)					
	4.4	40 774	E0 044	E0 149	E0 (0
Demand deposits adjusted, reporting member banks	11	60,776 103,876	59,966 104,723	58,163 105,003	58,60 104,42
Commercial, industrial, and agricultural loans, reporting member banks	††	29,903	31,972	32,125	31,89
U. S. gov't guaranteed obligations held, reporting member banks	††	29,267	27,324	27,169	27,15
Total foderal reserve credit outstanding	26,424	28,485	28,065	28,469	28,24
MONTHLY FIGURES OF THE WEEK		1953-55	Year	Month	Latest
Private expenditures for new construction (in millions)August		\$2,390	\$3,654	\$3,537	\$3,53
Public expenditures for new construction (in millions)August		\$ 980	\$1,608	\$1,603	\$1,63
Manufacturers' sales (seasonally adjusted, in billions)July		\$24.8	\$30.9	\$30.8	\$30.
Manufacturers' new orders (seasonally adjusted, in billions)July		\$24.3	\$30.8	\$30.1	\$29.
Manufacturers' inventories (seasonally adjusted, in billions)July		\$45.2	\$52.2	\$55.1	\$54.

^{*} Preliminary, week ended August 27, 1960. ‡ Not available.

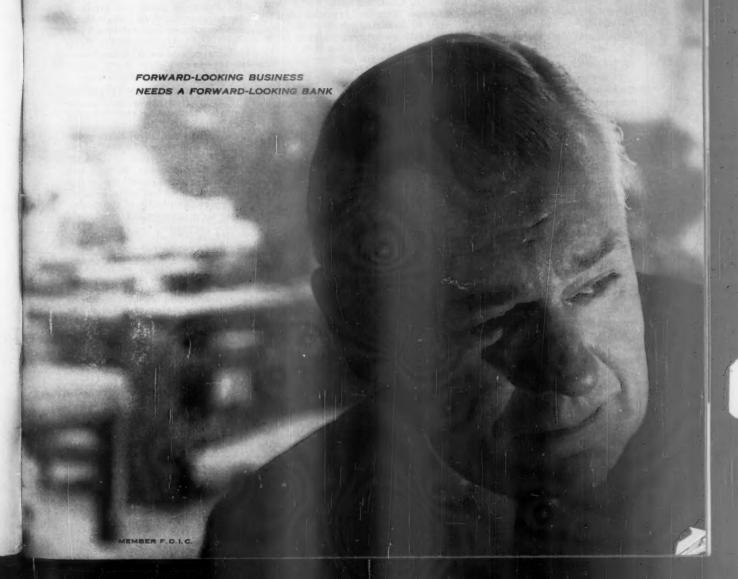
r Revised. & Date for 'Latest Week' on each series on request.

THE PICTURES—The Cover—John Teppich; 24 (left) UPI; 26-27—Yukishi Watabi; 30—(left) Ed Nano, (middle) Univ. of Chicago, (right) Lionel D. Edie; 31—(left) Chase Ltd., (middle) Harvard Univ., (right) Southern Methodist Univ.; 32—(left) Univ. of Michigan, (middle) Dr. Robinson Newcomb, (right) James McCullough; 34—Alleghany Ludlum Steel Co.; 50, 51, 52, 53—Douglas Kirkland; 66, 67—Ed Malsberg; 94—(left) UPI, (right) WW; 105, 106, 107—Bud Blake; 114, 115, 117—Jon Brenneis.

WHAT IS TODAY'S MOST PERPLEXING PENSION PROBLEM?

The problem for corporations is to invest today's contributions for tomorrow's benefits in such a way as to compensate—insofar as possible—for changes in purchasing power and living standards. The best answer is balance and selection in the investment program based on extensive research directed at this problem. Our Pension Trust Division has gained its reputation through successful management of pension and profit-sharing trusts—large and small. Individual attention to each fund has earned Bankers Trust its top position in the field. For further information, write to us at 16 Wall Street, New York 15, N. Y.

BANKERS TRUST COMPANY, NEW YORK





Mr. WILLIAM B. WEBBER

A Tektronix Vice President, says:

"We are happy we chose Employers Mutuals of Wausau as the carrier of our workmen's compensation. We find they have a friendly and effective way of working with us and our people.

"Other reasons too: Because Employers Mutuals is a national company we can simplify records by taking care of our countrywide field offices and our plant at one time.

"Then there is the matter of savings—the dividend we can expect through Employers Mutuals' help in promoting safe working practices.

"The picture lower right shows one way this works. At the left is George Babich, an Employers Mutuals' Safety Engineer. Part of his work with us is as advisor to our employee safety committees. Shown here on a safety inspection tour are E. E. Ashenbrenner, manager of our Fabrication and Moulding Division; Norm Olson, Chairman of this safety committee; and Lois Addington, head nurse.

"They're good people, these Employers Mutuals' representatives. Good people to know, good people to do business with." FOUND: "... AN INSURANCE COMPANY WITH OUR WAY OF WORKING"

Wausau Story

at TEKTRONIX, Incorporated
Portland, Oregon

THERE IS MUCH that is unique about Tektronix, Inc.—their products, plant, and philosophy.

The products developed and produced by this company are cathoderay oscilloscopes. At the left, Mr. William B. Webber, a Tektronix Vice President, shows us some models of these electronic instruments. The Tektronix oscilloscope is recognized as a precision tool by scientists and engineers in such fields as atomic energy, medicine, radar and guided missiles. This tool provides "a picture of changing phenomena," accurately measuring voltage from hundreds of volts to less than a hundred thousandth of one volt and measuring time from minutes to a few billionths of a second.







The Tektronix plant is a group of attractive one and two story buildings, forming an industrial park in a pleasant Portland suburb. Each building is landscaped with flowering bushes and green lawns, an inviting place for outdoor lunches.

Tektronix people appreciate the philosophy that guides their way of working: "respect for the dignity of each individual." Here each person assumes responsibility, takes pride in a job well done. Typical is the work of Irene Sherrick in the Unit Wiring Department. Wiring and soldering a unit may take a few minutes or up to ten hours, depending on the complexity of the model. Today there are over 3000 employees.

Why does a company choose one insurance company over another? The reasons vary—even though all workmen's compensation policies are basically the same. The difference is in the interpretation. At Employers Mutuals we interpret policies not by the law alone but also by principles and beliefs on which our company was founded. That's the "Wausau way of working."

Employers Mutuals of Wausau has offices all across the country. We write all forms of fire, group and casualty insurance (including automobile). In the field of workmen's compensation we are one of the largest. We are proud of our reputation for fast claim service and our experience in preventing accidents. Consult your telephone directory for the nearest representative or write us in Wausau, Wisconsin.

Employers Mutuals of Wausau



"Good people to do business with"

E K

EDITOR & PUBLISHER Elliott V. Bell MANAGING EDITOR Kenneth Kramer

ASSISTANT MANAGING EDITOR Robert B. Colborn ASSOCIATE MANAGING EDITORS John L. Cobbs, Peter French, Paul Finney SENIOR EDITORS

Clark R. Pace, Howard Whidden, M. J. Rossant, Leonard Silk, Richard L. Waddell

DEPARTMENTS

Business Outlook: Clark R. Pace, Editor
Economics: Leonard Silk, Editor
Finance: M. J. Rossant, Editor; Itwin Lainoff, H. Erich Heinemann
Foreign: Howard Whidden, Editor; Richard C. Halloran, Robert Gibson
Industrial Production: Theodore B. Merrill, Jr., Editor; Philip Osborne
Labor: Edward T. Townsend, Editor
Management: W. J. Arnold, Editor, Lois Stewart, Herbert Klein
Marketing: Richard L. Waddell, Editor; Cora Carter, George B. Finnegan
Personal Business: Joseph L. Wiltsee, Editor; Nathalie E. Lampman
Regions: Werner Renberg, Editor
Research: Jane H. Cutaia, Editor
Copy Editors: T. B. Crane (Senior Copy Editor), Jeanne A. Bernhardt, Robert F. Deed, John A.
Dierdorff, Lawrence H. Odell, Doris I. White
Staff Writers: John H. Maughan, Christopher Elias
Statistician: Resa A. Warshaw
Editorial Production: Jean Drummond, John A. C. Elder, George Heroux, Kenneth K. Kost,
Kathleen Kundel, Robert F. Murphy
Illustration: Richard A. Wolters, Editor; Grant Compton, Pictures; Frank Ronan, Graphics; Mario
De Vincentis, Jack H. Fuller, Herbert F. Kratovil, Jomary Mosley, Edwin Peay, Arthur Richter
Library: Tessie Mantzoros, Librarian
Assistant to the Editor & Publisher: Gerald W. Schroder Business Outlook: Clark R. Pace, Editor

U.S. & CANADIAN NEWS SERVICE

Atlanta Bureau: Jack E. Patterson, Manager
Boston Bureau: Brenton Welling, Jr., Manager; Lucie Adam
Chicago Bureau: Merlin H. Mickel, Manager, Franklin N. Karmatz
Cleveland Bureau: John K. Fockler, Manager
Dallas Bureau: John Whitmore, Manager
Detroit Bureau: William Kroger, Manager; Geraldine Hindes Detroit Bureau: William Kroger, Manager; Geraldine Hindes
Houston Bureau: Normand DuBeau, Manager; James P. Roscow, M. Yvonne Seadin
Milwaukee Bureau: Keith G. Felcyn, Manager; Peg McCormick
Milwaukee Bureau: Keith G. Felcyn, Manager; Peg McCormick
Philadelphia Bureau: W. B. Whichard, Ja, Manager; Eileen P. Schneider; Daniel B. Moskowitz
Pittsburgh Bureau: Richard N. Larkin, Manager; George W. New, Mary K. McCaffery
San Francisco Bureau: Richard Lamb, Manager; Margaret J. Scandling
Toronto Bureau: John D. Harbron, Manager; Anastasia Erland
Washington Bureau: George B. Bryant, Jr., Manager; Alan E. Adams, Glen Bayless, Roy Calvin,
Anthony DeLeonardis, John C. L. Donaldson, Jay Flocken, Boyd France, Donald O. Loomis,
Gladys Montgomery, Arthur L. Moore, Burkey Musselman, Seth Payne, Dean Reed, Morton
A. Reichek, Caroline Robertson, David W. Secrest, Richard A. Smith, Vincent Smith.

McGRAW-HILL ECONOMICS STAFF

Dexter M. Keezer, Director; Douglas Greenwald, Alfred Litwak, Margaret K. Matulis, Guenter H. Mattersdorff, William J. Brown

McGRAW-HILL NEWS SERVICE

Manager: John Wilhelm; Beirut: O. M. Marashian; Bonn: Morrie Helitzer, Silke Brueckler; Caracas: John Pearson; London: John Shinn, John Tunstall, Derek Barlow; Mexico City: Peter Weaver; Moscow: Ernest Conine; Paris: Robert E. Farrell, Helen Avati; Rio de Janeiro: Leslie Warren; Tokyo: Sol Sanders, John Yamaguchi, Toshiko Matsumura; Atlanta: B. E. Barnes; Chicago: Stewart W. Ramsey; Cleveland: Arthur Zimmerman; Dallas: Marvin Reid; Detroit: Donald MacDonald; Los Angeles: Kemp Anderson, Jr.; San Francisco: Jenness Keene; Seattle: Ray Bloomberg.



ASSOCIATE PUBLISHER Bayard E. Sawyer ADVERTISING DIRECTOR C. C. Randolph BUSINESS MANAGER Richard E. McGraw



BUSINESS WEEK . SEPTEMBER 3, 1960 . NUMBER 1618

BUSINESS WEEK • SEPTEMBER 3, 1960 • NUMBER 1618
Published weekly by McGraw-Hill Publishing Company, Inc. Founder: James H. McGraw (1860-1948)
SUBSCRIPTIONS: Available only by paid subscription. Publisher reserves the right to refuse non-qualified subscriptions. Subscriptions to Business Week solicited only from management men in business and industry. POSITION AND COMPANY CONNECTION MUST BE INDICATED ON SUBSCRIPTION ORDERS forwarded to address shown in box below. U.S. subscription rate for individuals in the field of the publication \$6 per year: single copies 50c. Canadian and foreign rates on request.

EXECUTIVE, EDITORIAL, CHECULATION and ADVERTISHED OFFICES: McGraw-Hill Building, 330 West 42nd Street, and Largy, N.Y.; second-class postage paid at Albany, N.Y. and at New York 1, N.Y. Title @ reg. in U.S. Patent Office. © Copyrighted 1960 by McGraw-Hill Publishing Co., Inc. Quotations on bulk reprints of articles available on request. All rights reserved, including the right to reproduce the contents of this publication. OFFICERS OF THE CORPORATIONS DIVISION: Nelson L. Bond, President; Shelton Fisher, Wallace F. Traendly, Senior Vice Presidents; John R. Callaham, Vice President and Editorial Director; Joseph A. Aller, Vice President and Director of Advertising Sales; A. R. Venezian, Vice President and Circulation Coordinator, Cofficers of THE CORPORATION: Donald C. McGraw, President, Joseph A. Gerard, Hugh J. Kelly, Harry L. Waddell, Executive Vice Presidents; L. Kelth Goodrich, Vice President and Treasurer; John J. Cooke, Secretary. Secretary.

UNCONDITIONAL GUARANTEE: The publisher, upon written request, agrees to refund the part of the subscription price applying to use remaining unfilled portion of the subscription if service is unsatisfactory.

SUBSCRIBERS: Please address all correspondence, change of address notices, and subscription orders to Fulfillment Manager, Business Week, 330 West 42nd Street, New York 36, N.Y. Change of address notices should be sent promptly; provide old as well as new address; include postal zone number, if any. If possible, attach address label from recent issue. Copies of publications are addressed one to two issues in advance; therefore please allow one month for change of address to become effective.

POSTMASTER: Please send Form 3579 to Fulfillment Manager, Business Week, 330 W. 42nd St., N.Y. 36, N.Y.

READERS REPORT

Growth Pattern

Dear Sir:

The special article The Growth Force That Can't Be Overlooked [BW-Aug.6'60,p68] was, I think, an absolute masterpiece.

It was about the most terse, concise statement of one of the most significant economic ideas I've ever read. I'm truly grateful to whoever wrote it.

WILLIAM RUDER RUDER & FINN

NEW YORK, N. Y.

Dear Sir:

Your article continued the theme you unfolded in your earlier Special Report. At first, I was reminded of a viewpoint that I have heard expressed often, that capital as a factor of production might include investment in the education of individuals as handily as any other forced savings for the future. Our technological advance would therefore be reaping investment sown in earlier years. But you chided early economists for overlooking technological change as a dynamic growth force. After thinking on the matter I agree with you that it was overlooked.

Looking back though, it is certainly not surprising that technological advance was overlooked by our leading economic thinkers. By definition, it is unexpected. So your observation that technology was overlooked offers me a reminder of how easily the creative powers of individuals are likewise overlooked. It is hard to foresee or to see. It cannot be counted . . . it cannot be graphed . . . it cannot be related to the income tax or the gross national product . . . and so many of us, as BUSINESS WEEK readers, are not alerted to its manifestations; not only in the day's poetry, literature, art, music, food, theater, or political thought . . but also in everyday business affairs (unless we make an unremitting effort to look for it).

ROGER P. SHERMAN

ENDICOTT, N. Y.

Dear Sir:

I have just finished reading the article concerning the importance of technological advances on economic growth. I found the article interesting, but confusing. The claim that land, labor, capital, and entrepreneurship have been overrated obscures the differences between static and dynamic economic



Industry is expanding in South Carolina at the rate of \$5 million a week ... or \$3 billion in new plants and plant expansion during the past 13 years. Why such a high productivity? Because South Carolina has the three essentials that create a superb business climate: a wealth of water and raw materials... a young, intelligent, hard-working labor force ... and an industry-favoring government vitally interested in helping business grow in South Carolina. Whatever you make, let us prove you can make it for less in South Carolina.



South Carolinians play golf the year around on excellently-kept greens within minutes of their busy cities . . . or on fabulous resort courses overlooking the sea. A naturally mild climate averaging 295 sunshiny days a year from her mountains to her seashore makes South Carolina a healthy, happy place in which to play or work. Tennis, sailboating, hunting, fishing, and horseracing are other year-round sports for which she is famous. Whatever your favorite recreation, let us prove you can enjoy it more in

SOUTH CAROLINA

for information, contact: Walter W, Harper, Director, Box B-7, South Carolina State Development Board, Columbia, S. C.

analyses. The traditional factors of production do indeed determine the level of production in a static economy, and moreover, economists have not ignored the role of entrepreneurs in the productive processes. But, let's not confuse production in a static situation with dynamic economic growth. To imply backward, classical thinking on the part of economists ignores the many contributions made to growth theory since the Keynesian revolution.

The great majority of economists appreciate the effects of technological innovations on growth, and I am sure will welcome the work of Fabricant, Solow, and Wassell because advancing technology has, to date, been virtually impossible to measure.

To state that "it's what makes productivity grow when you aren't investing anything more in plant and equipment to make productivity grow" doesn't make sense unless by technology the article means only cost cutting innovations that do not require expenditures. It seems to me that the bulk of technological advance makes itself felt in the economy only when investment is undertaken to put it into use, and whether or not investment is undertaken depends on many more factors in addition to the mere existence of new innovations and inventions.

KENNETH T. CANN BLOOMINGTON, IND.

• Of course, we agree—and said so. The Pattern concluded: "To stress the role of technological advance is not, of course, to deny that its impact upon the economy works through the investment process. New knowledge generally doesn't begin to operate until it's embodied in new investment: Knowing how to automate an assembly line won't do much for the economy until you invest in the new equipment."

Dear Sir:

Your article is truly the ideaman's or the inventors' Bill of Rights.

Technology is indeed the key to increased output and increased profit. With such firm evidence as indicated by your article the inventor no longer need take three or four per cent of the net wholesale selling price for his idea but is more properly entitled to fifteen per cent. Even fifteen per cent is still substantially less than the capitalist gains for his risk.

CARL F. BOESTER

LAFAYETTE, IND.



Acme Idea Man J. F. Kelly (left) views Idea No. \$3-63, which he helped develop, at The Northwest Paper Company, Chaquet, Minn.

Perfecting methods to keep packaged paper tight and square, without bowing skid tops, has been a project of Acme Steel for years. And here's proof that it's paying off.

An Acme Steel Strapping Press and Fully-Powered A4 Steelstrapper have eliminated loosening of strapping due to trapped air leakage between stacked sheets. Result: perfect skids that stay secure and square.

If stack misalignment and creeping packaging costs are pinching your profits, put Acme Steel's proved experience to work. Call your local Acme Idea Man, or clip the coupon for full facts.



STRAPPING

ACME STEEL COMPANY Acme Steel Products Division Dept. BFS-90 135th St. & Perry Ave., Chicago 27, III.

Please send me Idea No. \$3-64 and examples of how major companies in my field use Acme Steel Strapping.



use Acme Steel Strapping.						
Name			-			
Title						
Firm						
Address		1	2			
	-	***	1			



If you're a housing developer, contractor, engineer ... the name Smith & Loveless is a familiar one.

We're the largest manufacturer of factory-built sewage lift stations in the world.

Our installations have proved their efficiency all through the United States, as well as in Canada and Alaska-in municipal sewerage systems, suburban housing and industrial developments.

The Smith & Loveless station is completely factorybuilt and factory-tested . . . a fully equipped, easy-tomaintain underground pump room with conditioned air. Ready to install in a single day. Automatically lifts the sewage flow from one level to another . . . inconspicuous, quiet, trouble-free. And more economical than building a station at the site.

Another extraordinary Smith & Loveless development is the "Oxigest". A sewage treatment plant for small subdivisions, motels, schools. This factory-built unit fills a vital need in areas where it is impractical or impossible to connect with municipal sewer lines.

If there is a sewage problem in your area, or in the one you plan to develop, talk to us. During the past 50 years, the Union Tank Car Companies have treated, stored, produced, or converted almost every kind of fluid. And our water-softening, storage and conditioning services meet the important needs of consumer, community, and industry.

Smith & Loveless is one member of the Union Tank Car group of companies, each serving industry in a host of specialized ways.

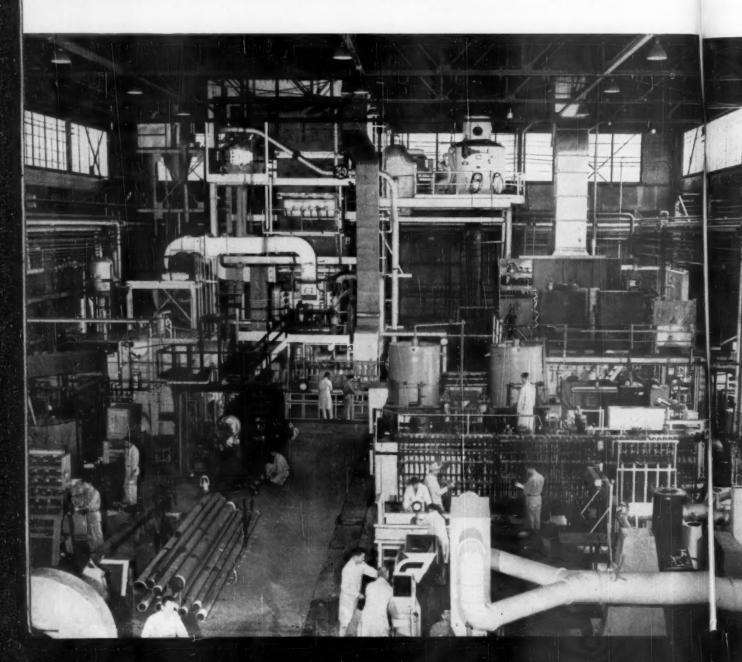
we're known by many names

ANK CAR Graver Oil & Gas Equipment Co. . Graver Tank & Mfg. Co. . Graver Water Conditioning Co. The Lindsay Company • Phoenix Manufacturing Company • Products Tank Line of Canada, Ltd. COMPANIES Refiners Transport & Terminal Corporation . Smith & Loveless . Union Overseas Company Union Tank Car Company

228 North La Salle Street, Chicago 1, Illinois

C-E MEASURES THE MERITS OF IDEAS

At Combustion, research guides the design of every product and is at the hub of every area of operation. It is a company policy, the premiums of which are paid for in the time and talents of many skilled and experienced specialists. Their purpose—to find a better way. Their goal—to enable Combustion to provide the most efficient, the most reliable and the most economical steam generating and fuel burning equipment available anywhere.



...WITH RESEARCH

Research activities at C-E range from studies of the nuclear characteristics of the atom and the chemistry of the molecule to the development of methods and materials, the test of metals and the operation of test boilers and nuclear reactor systems. Research, knowledgeable and in depth, is your assurance that C-E products are thoroughly engineered, are dependable and are as modern as tomorrow.

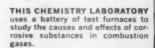
> THE KREISINGER DEVELOPMENT LABORATORY is used for the study of fuels and fuel burning systems, water, steam and com-bustion gases. It contains several test boilers, among them a large Controlled Circulation unit capable of operating at 2000 pounds pressure and a super-critical pressure boiler designed to produce steam at 5000 pounds pressure and 1200°F. This laboratory is one of eight C-E research facilities which, together, total more than four acres under roof.



THIS ADVANCED CRITICAL FACIL ITY is one of two zero power nucle-ar reactors used by Combustion for and experimentation.



THIS METALLURGY LABORATORY tests material strength at high tem-peratures with these creep-rupture





THIS PHOTOELASTIC LABORATORY makes plastic models of various kinds of pressure vessels and loads them to simulate actual operating conditions. Using straining frames and polariscopes, it analyzes the stress patterns locked in the plastic to determine suitability of design.



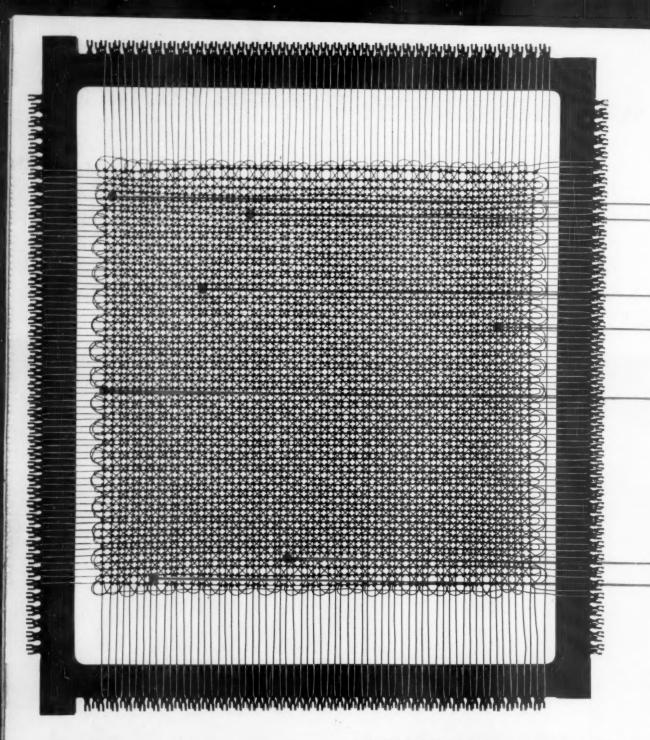
THE COMPUTER CEN. TER is used for many kinds of research work. C-E utilizes both digital and analog computer systems.

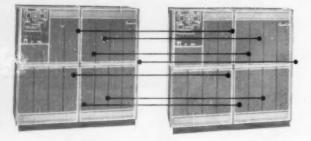
COMBUSTION ENGINEERING



General Offices: Windsor, Conn. . New York Offices: 200 Madison Ave., New York 16

ALL TYPES OF STEAM GENERATING, FUEL BURNING AND RELATED EQUIPMENT: NUCLEAR REACTORS: PAPER MILL EQUIPMENT. PULVERIZERS: FLASH DRYING SYSTEMS; PRESSURE VESSELS; SOIL PIPE





New kind of TELE-PROCESSING* SYSTEM: IBM 1401 systems send and receive information directly, with no intermediate handling of the message.

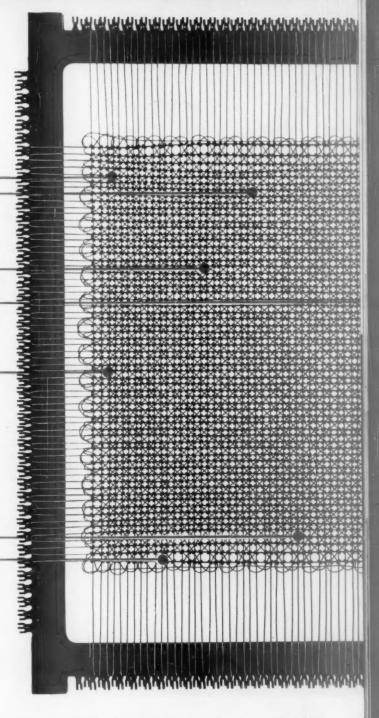
A new device enables the IBM 1401 data processing system to serve as a low-cost, two-way communications system in addition to its regular processing functions. With the new IBM 1009 data transmission unit, plus related dialing equipment, a 1401 can send data over long-distance or leased communication lines directly from its electronic memory to the memory of another 1401. There's no detour for transferring the data to cards or tape.

*Trademark

NOW
IBM 1401

DATA PROCESSING SYSTEMS
"TALK" TO EACH OTHER
LONG DISTANCE—

MEMORY TO MEMORY



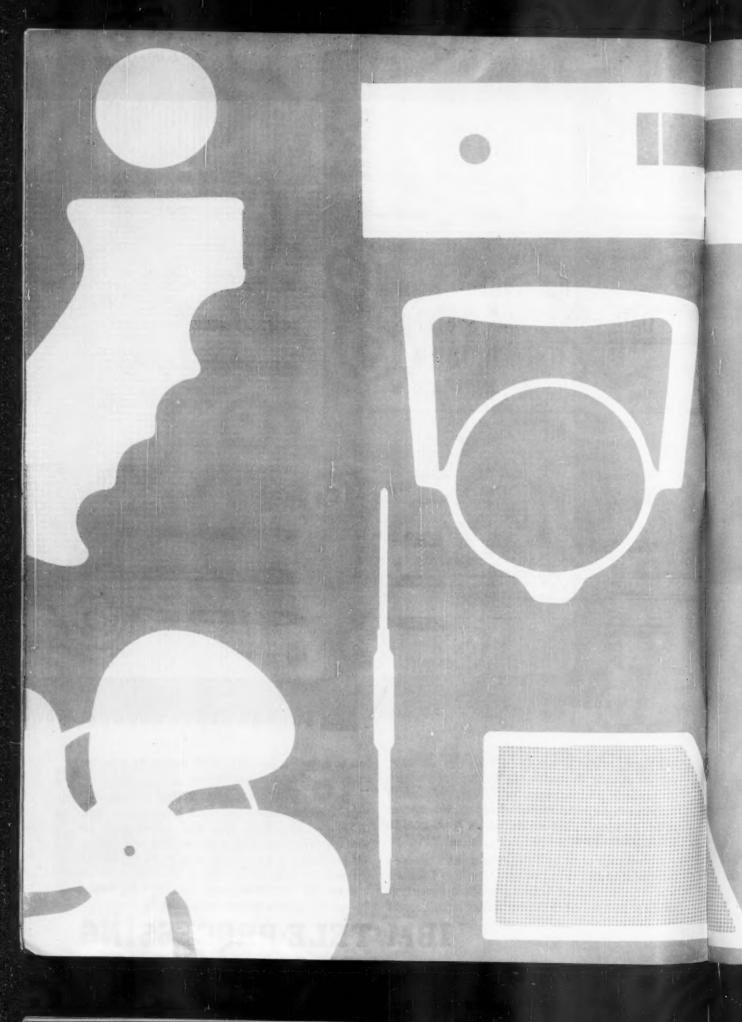
This machine-to-machine transmission saves time and effort, improves accuracy. The versatile 1401's card and tape facilities can be used for input and output. The 1401's high-speed printer also may serve as output. The transmission unit can also team up with other sending and receiving equipment developed for IBM TELE-PROCESSING systems.

This expansion of the 1401's capabilities makes possible a fast flow of information into the home office from a wide network of field installations. Business and scientific organizations can make profitable use of this new advance for such applica-

tions as accounting, inventory control, engineering, production scheduling and sales communications.

CAN AN IBM TELE-PROCESSING SYSTEM HELP YOU?
Business information is useful only if it can be acted upon.
TELE-PROCESSING systems make data available where and when it's needed. With years of data transmission experience, IBM can make your business data more useful. Ask your IBM representative about the advances in TELE-PROCESSING systems and what they can do for you. Data Processing Division, International Business Machines Corporation.

IBM. TELE-PROCESSING



What 3 things do these parts have in common?

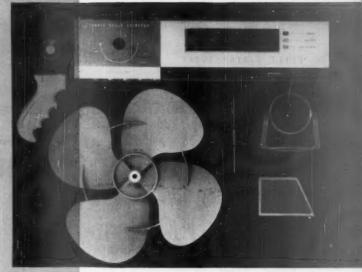
They perform better. Yet they cost less. And they are all molded of plastics.

The exhaust fan blades have a molded-in metal bearing, and are unaffected by corrosive fumes. The washing machine filter not only costs less to make, it also licked a rust problem. The one-piece phonograph spindle cap simplified a complicated assembly, while maintaining tolerances of \pm .003 and \pm .000.

The jewelers' screw driver, the pistol grip tool handle, the dryer control panel, and the milk bottle handle are all low cost product improvements, made possible by the ever-widening choice of plastics materials and the growing efficiencies of custom molders.

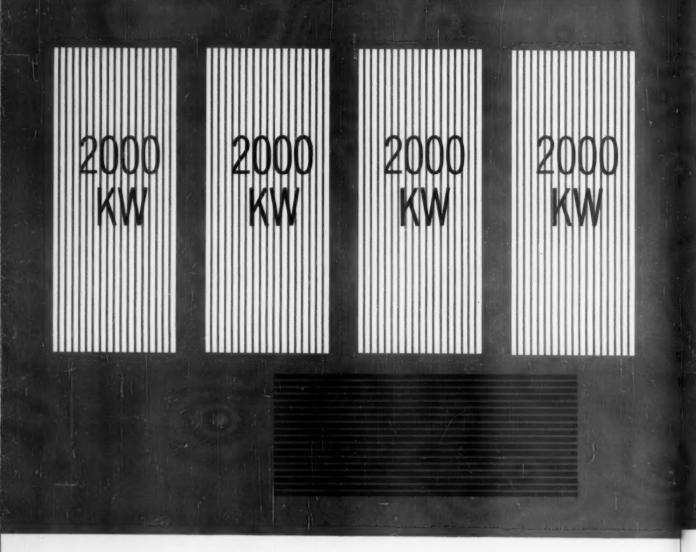
Think of the custom molder of plastics as the "manufacturer's manufacturer." His engineering staff measures the product for plastics. His tool-makers build the master molds to close tolerances. His manufacturing facilities produce the most complex parts with consistent quality, at rates to meet the tightest schedules and budgets.

Monsanto, supplier of plastics molding compounds to leading custom molders, has prepared a special report on "How To Buy Custom Molded Plastics." Write for your free copy to Monsanto Chemical Company, Plastics Division, Room 710, Springfield 2, Mass.



MONSANTO PAGE-SETTER IN PLASTICS





Electro-Motive Peaking Plants

New MU-100 plant \$82 per KW, F.O.B. Electro-Motive Factory

For those utilities seeking higher capacity peaking power, the new Electro-Motive 10,000 KW plant offers low investment per KW (as low as \$94 per KW installed at site) plus new operating and control features not found on other types of equipment.

Highly flexible. The MU-100 may be utilized in peaking, reserve or area protection applications. It may be remotely operated by a variety of methods—automatically by voltage or current sensing devices,

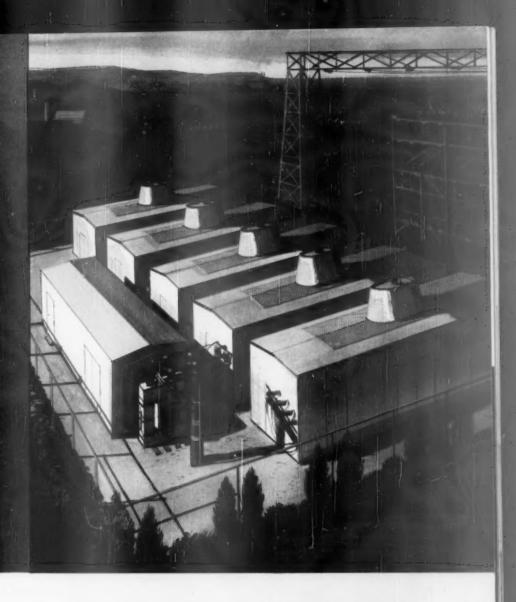
and by supervisory control such as leased telephone line or by carrier current. Self-contained design permits location at the step-down substation serving the load. Installation is simple and inexpensive, and the plant may be moved at any time to match changing load conditions.

Future expansion flexibility. Smaller Electro-Motive plants (2,000, 4,000, 6,000 and 8,000 KW) can be installed now with control equipment in place to expand later up to 10,000 KW.

By taking advantage of this plan-ahead feature, additional KW capacity can be added later for less than \$75/KW installed. For example, total end cost for uprating from 2,000 KW to 8,000 KW is the same as the initial cost for an 8,000 KW plant.

New controls. The plant control contains many innovations which further extend flexibility. The plant may be operated remotely at various capacities to match load conditions. Each generator produces 2,000 KW—and each may be operated individually or





now available up to 10,000 KW

in any combination. Thus, the plant will provide 2,000, 4,000, 6,000, 8,000 or 10,000 KW. With selective control a block of power is always available—even during maintenance.

Fast start. From a cold start, the MU-100 is on line carrying load in less than three and one-half minutes. A spinning reserve start has been designed into the plant which reduces starting time to a minute and a half.

With the addition of the MU-100 to the Electro-Motive line, the most complete range of capacities is available in specialized peaking equipment. Thus it is possible to match capacity to need for the most efficient operation and lowest investment. An increase in demand is handled by expanding the plant—at low incremental cost—with additional generating components.

An analysis of utility peaking needs will reveal the savings possible with the application of Electro-Motive equipment. Ask the Electro-Motive representative for information.

ELECTRO-MOTIVE DIVISION GENERAL MOTORS · LA GRANGE, ILLINOIS

Sales-engineering effices: Chicago, New York, St. Louis, San Francisco

In Canada: General Motors Diesel Limited, London, Ontario







MU-40 4000 KW Diesel



MU-60 6000 KW Diesel



MU-80 8000 KW Diesel



MU-100 10,000 KW Diesel MU-709F 5000 KW Dual-fuel

HOW HERCULES HELPS...

QUENCH A SUMMER THIRST

Your summer picnics will be more delicious when you keep your drinks in Aladdin's new Dura-Clad vacuum bottles. Molded in one piece with Pro-fax®, Hercules polypropylene, its design permits you to keep your drinks piping hot or frosty cool. The jacket's Pro-fax construction makes it crack-proof and resistant to stains, scratches, and heat. The unusual "Pitcher Pour" handle feature makes it safer and more convenient to handle.



BEAUTIFY CLASSROOM FLOORS

The extreme durability of solid vinyl and vinyl-asbestos floor tile is just one of the many reasons for use in classrooms and other institutions. Despite heavy traffic and hard usage, vinyl flooring retains its color, requires a minimum of care, and holds a constant gloss throughout its long service life. All of these end-use advantages are maintained when vinyl flooring manufacturers use Neolyn® resin modifiers made by Hercules. And to the vinvl floor tile manufacturer, a Neolyn resin in the product means ease of processing, improved color stability, and an economical way of reducing binder content or increasing low-cost fillers without impairing the surface of the tiles.

HERCULES

HERCULES POWDER COMPANY

900 Market Street, Wilmington 99, Delaware

CHEMICAL MATERIALS FOR INDUSTRY



BUSINESS OUTLOOK

BUSINESS WEEK SEPT. 3, 1960

More and more people are asking: "When's the upturn coming?"

You get about as many shades of opinion as there are people willing to guess (page 30). But a few observers are beginning to admit they can't see a rise of even normal seasonal proportions this fall.



Those who hope or believe that the remainder of 1960 will show real improvement—or that the worst will be over before we are far into 1961—place a good deal of faith in easier money.

Beyond that, there is the tendency to expect autos to give the economy a lift this year with housing helping out by next spring.

A good guess on auto output for the fourth quarter—if one has to be made right now—would be 1.7-million cars (page 23).

That would be big for the time of year—a little higher than the last quarter of 1950 and surpassed only by 1955's last three months.

But, then, Detroit is thinking big, at least for now.

Production of 1.7-million cars in the final quarter would make 1960 a very respectable auto year with a total of 6.7-million. That would nose out 1950 for second-best year.

More important than records or near records, though, is the fact that this might just do an up-by-the-bootstraps job for general business.

It hardly needs saying that such activity in autos would do a lot for demand in steel, rubber, and other raw materials as well as in plants supplying the auto makers. And it would fan out in employment.

Here's the biggest danger in trying to predict either output or sales of automobiles right at this time:

What happens over the rest of this year—and perhaps in 1961 as well—depends on clearing the decks of the old models now.

Nearly all auto makers are giving dealers cleanup bonuses now; few are under \$75 and some run to about twice that.

And the number of cars to be sold is hard to pin down. For example, dealers told Detroit that only about 425,000 cars were sold in July; yet actual registrations, when the total is in, probably will be just about 500,000 for U. S.-built cars.

Not all cars are registered in the month when they are sold, it's true. But it's also true that sales bunch up unrealistically during contests; some July "sales" may have been hurried into June to make that month look good—or saved over for August.

Disappointing retail sales in July, particularly in hardgoods, raised fears among business analysts. Belief that the consumer was bulwarking the economy was shaken by the figures.

But the Commerce Dept. flash estimate of retail sales has to depend on things like how many cars dealers say they have sold.

BUSINESS OUTLOOK (Continued)

BUSINESS WEEK SEPT. 3, 1960

Thus if the July reports on auto sales suffered from fudging, then the consumer may have been doing better than he's given credit for.

---]

Looking for a quick upturn in housing probably isn't realistic.

Actually, mortgage money is a little more plentiful. But you'll have to do a lot of hunting to find any place where it is cheaper.

Under the circumstances, buyers looking for better deals are likely to be disappointed and builders aren't encouraged to take chances.

Right now, homebuilding is disappointing even to those who never did expect too much of it this year.

The July slump in housing starts, to a level 10% below June's seasonally adjusted rate and 26% behind a year ago, was a shocker.

And if last month's seasonally adjusted annual rate of 1,173,000 starts doesn't look low to you, you're probably still thinking in terms of the old figures based on a different method of estimating. On the new basis, July's annual rate for starts last year was 1,546,000.

Housing starts have been sliding now, with only minor interruptions, for some 16 months. For a year, it has been more a dive than a slide.

This raises an old bugaboo. Have we finally made up the homebuilding deficits of all those lean years from 1928 to 1946? Are we now in a lull until all those postwar babies start coming of marrying age (a rush that won't really start until 1964 and 1965)?

If we are, you needn't count on housing to help pull us out of the next recession; rather, real estate problems will worsen it.

Housing's background has been changing, without question. The shortage of earlier years no longer exists.

This shows up in the vacancy rate of more than 7%, nationwide, on rental units (though that rate is an exaggeration, in a sense, as many units haven't running water and some aren't year-round homes).

Here's another slant on the housing supply: The Census Bureau listed nearly 58.6-million housing units in the inventory this spring, up from 46.1-million in 1950.

We have 52.6-million households now, which means there are 11% more housing units than households. In 1950, there were 43.6-million households, and housing units outnumbered them by not quite 6%.

Here again, many of the housing units counted aren't up to snuff. But surely the bitter edge is off the housing shortage.

Construction work, over-all, continues to point downward.

August's annual rate for work put in place is estimated at $$54\frac{1}{2}$ -billion, down about \$400-million from July and more than \$3.2-billion behind the same month last year. Most of the slump, of course, stems from the sharp decline in homebuilding.

Contents copyrighted under the general copyright on the Sept. 3, 1980, issue-Business Wook, 330 W. 42nd St., New York, N. Y.



Experience counts . . . and Jessop has it

There is no substitute for experience in making steel for the reactors of nuclear submarines like the Nautilus, the Skate and the Polaris-firing George Washington. Jessop's activity in nucleonics dates back to the early days of the Manhattan Project.

Today, Jessop's still at it—continuing research,

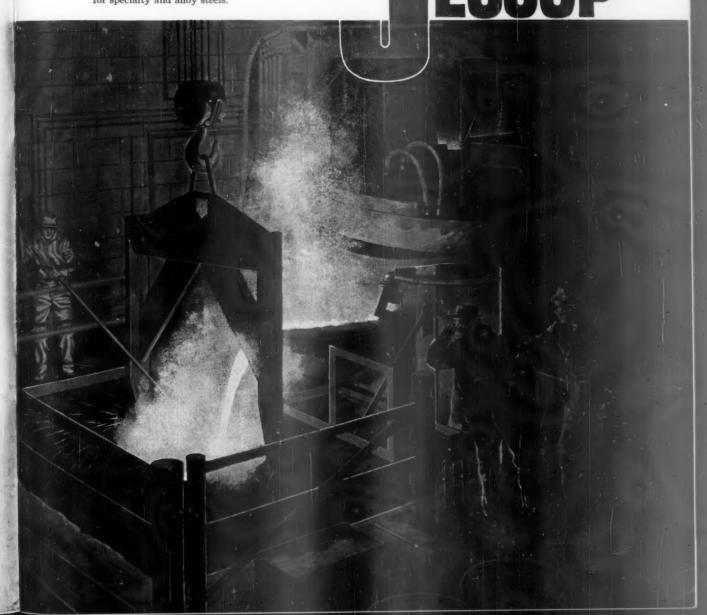
Today, Jessop's still at it—continuing research, improving techniques, piling up experience in making sophisticated steels to harness the atom. And Jessop is out front in other steelmaking fields too.

Whether you use heat- or corrosion-resistant stainless steels; abrasion- or shock-resistant steels; nonmagnetic or precision ground steels; high speed, cast-to-shape, clad or alloy steels, you can be sure of the quality—and service—you'll get when you do business with Jessop.

In quality steelmaking experience counts, and Jessop has it. Call a Jessop sales office in any of 23 major cities of North America and discuss your needs for specialty and alloy steels.



Plants and Service Centers:
Washington, Pa. • Los Angeles • Chicago • Detroit • Owensboro, Ky. • Wallaceburg, Ont.



LABELS OF ALCOA ALUMINUM catch the customer's eye, and hold it . . . give instant product identity . . . instant sales . . . simply outshine your competition. From cosmetics to candy, aluminum labels impart to your product that "look of quality and value"...these are labels that glisten with sell . . . go right on selling even after the purchase is made. Anywhere, aluminum foil labels stand out . . . stay bright . . . stay on. And, attention-getting foil labels can boost your product into a higher sales bracket. We invite your inquiry. Aluminum Company of America, Box 1665-J, Pittsburgh 19, Pa.

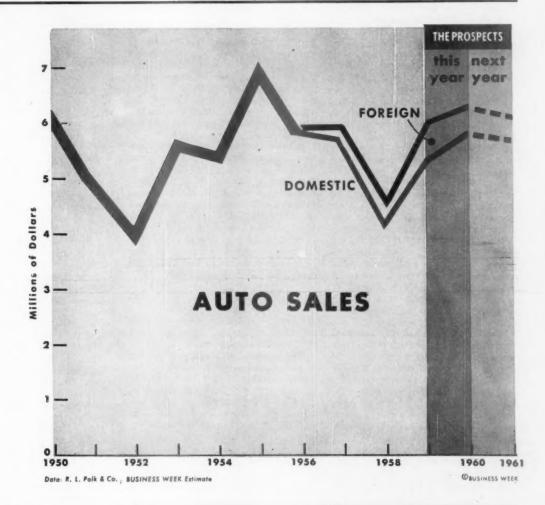




Foil Packaging

Put Alcoa's up-to-the-minute aluminum packaging services to work for you. We create new designs, check costs, answer questions on anything from appearance to performance. We offer you full-scale research facilities . . . merchandising and marketing data . . . the most sales-minded approach in the industry. All mobilized at Alcoa to help you design it . . . apply it . . . sell it.

NUMBER 1618



This Year Good, Next Year Lower

The forecasts in the charts above may look pretty grim to some people-but they shouldn't. Auto sales this year could still be the second best in history: and even if they should drop some next year, it still is a good year any time Detroit and its dealers sell more than 6-million automobiles.

As of now, the outlook this year is for sales of domestic cars to go no higher than 6-million, and for imports to be under 500,000. That's about in line with estimates made last spring, but it's far below figures that were being kicked around at about this time a year ago. All the same, for domestic cars, it

is a 10% increase in sales over last year. · Work Ahead-Everyone expected imports to fall off this year, though few foresaw the size of the drop. But retail sales of U.S.-made cars were doing fine until July, when they fell nearly onethird below the June figure. They staggered part of the way back up in August, but even so, dealers will have to hustle. They'll have to sell nearly 1.9-million new cars in the last four months to reach 6-million for the year. That's not impossible, but it has seldom been done in the past.

It is even difficult to see how the industry can absorb fourth-quarter production of 1.7-million, let alone the higher figures being talked officially. If the estimates in the charts prove near the mark, dealers will end 1960 with 800,000 to 1-million new cars in stock.

· Higher Sights-There are some mighty capable people in Detroit who think the BUSINESSS WEEK estimates are low. This week, E. N. Cole, vice-president of General Motors and general manager of Chevrolet, was talking about 1960 sales of 6.8-million, including imports. And the industry's present production estimate for the fourth quarter is 1.9-million.

But that production figure is arti-

ficially high. There are at least eight new car models coming out, and their manufacturers will schedule heavy output to test the market. For any car that isn't booming, the spigot can be turned off fast. Steel mills report the auto industry is ordering only 30 days ahead—a hand-to-mouth basis compared to the 45 to 60 days' time that once was allowed.

• Eyes on 1961—The outlook for auto sales in 1961 is tied to the national economy; in the long pull autos always follow the gross national product. It takes a boom year, such as 1950 or 1955, to send auto sales through the roof. There's no boom in sight for next year. Sales of around or better than 6-million new cars in a soft or delicate economy would be quite an achievement.

Never since the end of the war have automobile sales risen three years in a

Nevertheless, General Motors sees a much better year ahead. In showing his new cars to the press this week, Cole gave GM's official forecast: "Car sales to reach as high as 7-million," including imports. American Motors Corp.'s Pres. George Romney has so far refused to guess at next year's total market. The only other auto executive at bat so far is Studebaker-Packard Pres. Harold E. Churchill. This week, he reluctantly estimated 5.9-million to 6-million U.S.-made cars for 1961.

• Twice Shy—There's at least one good reason for the auto executives' wariness on predictions. Toward the end of last year, in their enthusiasm over the national economy and their new smaller cars, the auto manufacturers were making such forecasts of the total market as: "will reach and probably exceed 7-million" (Chrysler); "7-million" (Ford); "in the area of 7-million" (GM); "7-million to 7.5-million" (American Motors); "a minimum of 6.5-million" (Studebaker-Packard). (BUSINESS WEEK went along with the crowd: 6.75-million

domestic, plus 500,000 imports for a 7.25-million total.)

As the year dragged on, everyone backed away from these peak estimates; in several speeches throughout the year, Ford's marketing research manager, Robert J. Eggert, has stuck to around 6.7-million.

 Miscalculations—A combination of things went wrong with the original estimates.

It was assumed that the steel strike had switched a substantial number of purchases out of 1959 into 1960; but there's nothing to indicate that happened. Detroit thought inventory rebuilding after the steel strike would carry over into the third quarter. Instead it just about ended early in the second quarter, and the total economy turned mushy.

Sales fell off more sharply than anticipated for imports, and for some standard cars such as Ford, Oldsmobile, and Pontiac. And the news that there would be more compact cars to choose from this fall—disclosed by the manufacturers officially as early as April—may have postponed some buying.

Now, as the auto man gives his crystal ball its annual polishing, he sees some of those factors still present in the market for the 1961 model year.

I. The Pluses

Obviously, the auto people are finding more factors to encourage them than to discourage them.

New models. At the top of the list of plus factors is what is called "new model stimulus." That has a double kicker this year. The standard cars in most lines have been thoroughly reworked, including a new Lincoln Continental, a new Thunderbird, and a redesign of the Chrysler-built cars such as the 1961 Plymouth (below). Then there are five new compacts: Buick, Oldsmobile, Pontiac, Dodge, and Studebaker. The Rambler American has been

Passenger car production U.S. plants, by quarters 1960 1st2.0 million 2nd1.8 million 3rd1.2 million 4th1.7 million 1961 1st1.8 million Cala: Nine Months of 1960, Word's Automotive Reports; All Others Are BW Estimates © BUSINESS WEEK

completely restyled. There are new body styles in the original compact

The auto industry always counts heavily on creating excitement, and the great variety of 1961 cars should do that if nothing else. Many people in Detroit believe that the real reason 1960 isn't going to be the biggest year in history is that the industry created excitement and then couldn't furnish the cars before the prospects cooled off.

Car age. Next of the plus factors

Car age. Next of the plus factors could be the age of the cars now in use. According to M. C. Patterson, Chrysler vice-president and general manager of Dodge, 26.7-million cars on the road are more than five years old. This is one of the reasons he expects a "good" year; and he could be right.

Many of these older cars likely are second cars in a family. When continual repairs to these cars are measured against a presumably trouble-free compact selling at around \$2,000, there is a powerful urge to buy.

Price. Pampering that urge will be the prices of the 1961 cars. There is certainly an effort to hold the line on prices, and at least one popular make is going to cut prices noticeably.

National economy. Detroit doesn't see anything drastic happening to the national economy. Certain segments of it will be minuses as far as the auto companies are concerned. But auto forecasters count cheaper credit in their favor. And auto salesmen are easy to please. They don't insist on a boom; they just want the spenders to think everything's all right.

II. The Minuses

Put all those factors together and they spell a very good year—at least 6.5million retail sales—to men at Ford and Chrysler as well as at GM. Yet there are dissenters, for there are some bothersome elements apparent.

The first and most important of the minuses for 1961 is the national economy itself. Interviewing economists



A LOT OF RESTYLING, as in this sneak shot of a 1961 Plymouth, is one of the things behind Detroit's optimistic sales forecasts.

around the country this week (page 30), BUSINESS WEEK found none who expects business to be better next year, many who look for a drop.

The other minuses are to be found

in the auto industry:

Used cars. The used-car market has shown a little more strength in recent weeks. But it is not healthy, because it is going to take a long time to reestablish a price structure accommodating the compact cars. And the market is about to take another jolt with the new compacts for 1961.

Labor contracts. The automobile in-

Labor contracts. The automobile industry's labor agreements come up for negotiation next summer, with contract runouts at the end of August. There are bound to be some work stoppages—there always are, and any strikes that interfere with the production of a fast-selling car can be a drag on total sales as well as on production.

Imports. Even one importer who has every reason to be optimistic, C. H. Hahn, vice-president of the Volkswagen-America, sees imports falling to not much more over 400,000 in 1960. He thinks they will bounce up somewhat next year. Others are more skeptical. Studebaker-Packard's Churchill, who sells Mercedes in this country, says, "There's going to be a continual depreciation in sales of imports."

Inasmuch as this year the only imports with proven strength have been Volkswagen, sports cars, and low-volume specialty makes, the importers are going to have to work to get up to

400,000 next year.

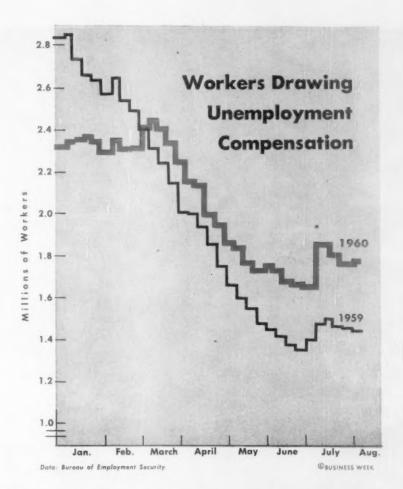
III. Bright Spot

The only unarguable outlook for the auto market in 1961 is the prospect for sales of compact cars: It's fine. Before the end of next year the smaller vehicles are expected to be taking one-half of the total market. The number of compact cars available could very well be the real strength of 1961's auto market.

It is also unarguable that except for the new compact cars this year from General Motors, Ford, and Chrysler, the domestic sales figure would not be up there where it is, headed for a 6million-car domestic sales year.

For instance, only sales of about 250,000 Corvairs will push Chevrolet this year to an all-time record. In a year when the total market is about 10% above last year, compact sales are going to be more than double the figure for the compacts in 1959.

It is mainly because of the additional number and variety of smaller cars that some Detroit people feel so confident about 1961. And history doesn't bother them in the least. Says a man at Chevrolet: "Breaking records is our



More Breadwinners Idled

Much summertime unemployment is unemployment only if you accept as realistic the official definition: looking for work, but without a job. Thus, much of the present officially reported unemployment represents youngsters who would like to have jobs, are looking for work, and haven't found it. How many of them actually need to work is another matter.

The chart above, on the other hand, takes in only those unemployed workers who ordinarily would be more or less regularly employed—employed enough of the time to have built up eligibility for unemployment compensation when they are laid off. They are, generally speaking, year-round breadwinners (for themselves, at least, and probably for a family). Unemployment among these workers is a more serious problem than among seasonal workers such as out-of-school teenagers.

 Running Higher Now—Compensated unemployment sinks, characteristically, throughout the spring as out-of-door work opens up and general activity rises seasonally. The bulge in the first week in July is, in a sense, technical and artificial: Vacation season finds a few who aren't entitled to paid vacations joining the compensated unemployed momentarily, while a new quarter's wage credit becomes available to those who had exhausted their eligibility during the previous quarter (but who, being still unemployed, enjoy a new "entitlement" in the new quarter).

As the chart shows, compensated unemployment ran below a year ago through the month of February but has been higher ever since.

The difference results largely from two factors:

 This year's listless business. Manufacturing usually provides jobs for a fairly large portion of all those entitled to unemployment compensation; this year, manufacturing employment declined.

 Last year's very active business, particularly in manufacturing, as industry stocked up for the expected steel strike. (Employment in factories in July this year was 160,000 less than a year ago.)



WINKIE'S WINK is the result of a plastic eye with an eyeball and eyelash painted on underside. The toy's arms turn inward, so it can be attached to an object. Winkie was inspired by the Australian koala bear, which clings to trees in the same way.



Winkie plays pinball game . . .

Japan's

This week in Tokyo a little blackfaced, inflated vinyl doll is winking at passersby from every conceivable place and position. He is Winkie, the biggest craze to hit Japan since the hula hoop had a short but violent imported, popularity in 1958.

Nobody is more surprised than Winkie's manufacturers, Takara Vinyl Products Mfg. Co. Takara is turning out the dolls at the rate of 20,000 dozen a month, but figures it is now running at about a third of demand. Domestic orders are pouring in at the rate of 2,000 dozen a day, and in October Takara will begin shipments of the doll to Woolworth's and New York Merchandising for the U.S. market.

• "Negro Boom"—Winkie's popularity is the latest in the boom in all things "Negro" in the Japanese market—jazz, films and "Funky" (a U.S. jazz term meaning earthy or bluesy) clothes. Harry Belafonte, American ballad singer, had a whirlwind tour of Tokyo and Osaka in July. Advertising circles report that his fee for a half-hour TV show was \$70,000, the highest ever paid a foreign talent. The Mills Brothers are now on tour in Japan. Theatrical circles say a crescendo is building up for the opening of Porgy and Bess, the U.S. film based on the Gershwin opera. Orpheo Negro, a film shot in the Negro slums of Rio de Janeiro, broke all records for such productions.



... directs traffic on the Ginza



... drops into a Tokyo bar ...



. . . strolls with smart set.

Winkie Doll Sets Off a New Craze

Toshio Wakabayashi, Takara designer who worked out the idea for the doll, says he was gambling on the Negro boom when he started production in April. Ironically, he says, it violates two tabus of the Japanese and U. S. toy industries: Never use human characteristics for a teddy bear-like toy, and never use black.

• Half Human—Actually, Winkie is only half human. Wakabayashi was inspired by the little Australian koala bears that turned up for the first time last summer in Tokyo's Ueno Zoo. He designed the arms so they pull inward and thus the light toy can be attached to almost anything. This clinging characteristic seems to account for as much of Winkie's appeal as his black face.

plastic eye with an eyeball and an eyelash painted on the underside. When it is turned in the light, one eye or the other alternately gives a winking effect.

• Production Problems—Demand for the doll has been out of all proportions. Originally it sold for 180 yen, or 50¢. But a black market has sprung up, with Winkies selling for as much as \$10.

Winkie's wink is the result of a

Takara can't boost production more to meet demand because of its relatively small plant facilities. Its only hope is to invite other members of the Japan Toy Manufacturers Assn. to produce the doll under license from Takara.



DEPARTMENT STORES are unable to keep up with demand, now ration one hour during one day a week to sell the dolls. Winkie will invade the U.S. via Woolworth's this fall.

Ground Rules Set for TV Debate

- Nixon and Kennedy will face each other on the TV screen three and perhaps four times.
- Agreement was reached this week by negotiators from both parties, after weeks of argument on details.
- Opinion is divided on which candidate will benefit most from the face-to-face TV appearances, but this seems certain to be the campaign pattern of the future.

Television will bring U.S. voters a "first" in political history this year—the Kennedy-Nixon debates—that may well determine the outcome of the election

The two candidates are approaching the event with both confidence and fear—each confident that he will acquit himself profitably, each fearful that a goof or a gaffe could spell disaster. Networks estimate that upward of 50-million people will be watching what might be called everyman's Lincoln-Douglas debate.

 Agree on Schedule-After weeks of negotiation between staff aides, both sides met with network officials at the Mayflower Hotel in Washington this week to set up the schedule. They agreed on these dates:

Sept. 26—Live, face-to-face debate from Chicago on domestic policy, 9:30 to 10:30 p.m. EDT.

Oct. 13-A "Meet The Press" type program with both candidates and three or four newsmen, using a split-screen technique with one candidate on the West Coast and the other on the East

Coast. (Time has not yet been set.)

Oct. 21-Live, face-to-face debate from New York on foreign policy, 10 to 11 p.m. EDT.

There may also be another news panel show Oct. 8 if the three networks can work out an agreeable hour. Both candidates are willing to have this fourth appearance.

The negotiations were a three-way affair, with the networks offering in advance to make every possible effort to provide time in whatever slots the candidates decided upon between themselves.

 Network Arrangements—Networks originally offered eight hours. Both candidates agreed to such appearances, and it might have seemed a simple thing to work out the arrangements. But negotiations took weeks, and many details remain to be ironed out.

The touchiness of the negotiations was concrete evidence of how critical both sides consider these debates to be, when the latest Gallup Poll is

showing the two candidates evenly divided, 47%-47%, with 6% undecided. Actually, both candidates figure there is a larger undecided vote than that.

• Debating Fine Points—Details of the program arrangements could have important effects: how the debates are managed to give each equal time and prominence, who the interviewing newmen will be, whether candidates shall use notes, whether there is to be a live audience, how many shows there will be and how close to Election Eve.

The negotiators argued heatedly through four sessions. From what could be learned, the Kennedy side wanted five shows, running up to within a few days of Election. The Nixon side started out talking about five at the first meeting in New York, four at the next, three at the next, and finally settled on "three or four."

The Oct. 21 cutoff date is reportedly the latest date the Nixon forces would agree to. Klein told a press conference afterward that it would be impossible to arrange a date after Oct. 21 when the two could meet. There also will be no studio audience that might serve as a "stacked" cheering section.

Both sides agreed that the debates must be live. Although they will be taped for delayed broadcast on the West Coast, nobody will edit the tapes. Selection of newsmen for the panels is to be left up to the networks.

The Kennedy side apparently was ready to agree to the condition Nixon laid down in advance that no text on notes could be used. But the negotiators declined to say whether final agreement had been reached on that.

All sides, including the networks, concurred in a "no sponsorship" policy. The shows will be hour-long units.

Negotiators for the three sides were: For Kennedy, staff aide and speech writer Ted Sorenson, and Leonard Reinsch, campaign radio-TV director and manager of the Democratic Convention in Los Angeles.

For Nixon, staff TV aide Ted Rogers (former producer of Wide, Wide World and The Home Show), press secretary Herb Klein, and adviser Fred Scribner.

CBS was represented by Sig Mickelson, president for news; NBC by William R. McAndrew, vice-president for news; ABC by news chief John Daly, and Mutual by Stephen McCormack.

• Sharp Debate—The debates will show two sharp, battling intellects at work. Both candidates are excellent debaters; both have solid understanding of the issues and formidable knowledge of the facts and details; neither needs any props or prepared speeches to shine; both have proven ability to "get across" on TV; both are endowed with that unknown "X" factor of public appeal.

Nevertheless, politicos on both sides figure that the debates are going to settle a substantial and perhaps decisive number of votes in favor of one candidate or the other. Even if neither side wins on the arguments, the impression that each candidate makes is going to be toted up in ballots.

be toted up in ballots.

• Which Man Gains-Those who think Kennedy will profit most reason this way: Nixon is already a "known quantity." As Vice-President, he has had more exposure to the public over the years than Kennedy. Therefore, he probably does not stand to pick up many new fans as a result of more public appearances. Kennedy, on the other hand, has been seen and publicized mostly in a glamorous sort of way. Most of the public has not seen him coming to grips with the issues. They have heard much about his egghead advisers and speech writers, and they may wonder how well he understands and can handle issues on his own. The viewers who have doubts along this line will have them dispelled.

Those who think Nixon will profit most reason like this: Nixon is at his best in debate and argument. His debating experience goes back to college days. The public likes him in this role—talking back to Khrushchev in the "kitchen," defending U.S. policy in arguments with students and hecklers in Latin America. Some voters who "just don't like Nixon" but don't know quite why will be convinced that he is the best man to handle the nation's

• The Year for It—It was fortuitous circumstance that made the great TV debates possible this year. Republicans would not have agreed to them in 1956, because they figured Pres. Eisenhower would simply be providing a stage for the challenger. But this year both candidates are known national figures; the polls rate them about even; neither is in the role of the challenger; and they stand to gain or lose about equally.

But it may well be that the precedent is being set for future campaigns that will make TV the most decisive influence in any election. Candidates in the future may be obliged to debate on TV whether they want to or not. An incumbent who did not want to help publicize his challenger might have a hard time explaining why he refused to meet his opponent before the cameras.

• "Equal Time"—Congressional passage of a resolution exempting broadcasters from the "equal time" law for Presidential and Vice-Presidential candidates cleared the way for the great

confrontation.

Broadcasters will not have to grant equivalent time this year to such fringe candidates as Lar Daly, a legitimate though self-styled candidate for President who demanded and got equal time on the Jack Paar show after an appearance there by Kennedy, and who then made his appearance in an Uncle Sam suit.

Many congressmen had reservations about the suspension of equal time provisions. Rep. John B. Bennett (R-Mich.) voted for it although he feared it delegated to much authority to broadcasters. Rep. John Moss (D-Čalif.) said he trusted the networks to be fair but doesn't trust all local stations to be equally objective in presenting "spots" on behalf of the candidates on the local level. He complained of what he considers "increasingly partisan operation" of some broadcasters.

At any rate, broadcasters will be watched closely to see how well they live up to their new responsibility. The Senate has appointed a special "watchdog" committee to consider any report of favoritism. House Commerce Committee Chmn. Oren Harris (D-Ark.) promises an equally vigilant scru-

tiny.

 Money Matters—The debates will mean a saving of about \$2-million to the political parties. Columbia Broadcasting System had estimated that three shows would cost the network close to half a million dollars.

Over-all, of course, the television industry benefits from extensive time purchases by both parties. Neither party headquarters would say how much time it expects to buy, but both parties will take several half-hour shows nationally and a great many "spots." State and local parties will buy time heavily as Election Day draws closer.

Broadcasters expect political time purchases to account for as much as 20% to 25% of local time sales in the final couple of weeks of the campaign. This is based on a survey by Broadcasting Advertisers Reports of political use of TV in the closing days of the Southern primaries, which are the real election in that part of the country.

Asian Rivals End Old Dispute

World Bank settles quarrel between India and Pakistan over Indus River water. Huge irrigation project can now be started.

A bitter, potentially dangerous dispute between India and Pakistan was settled this week after 12 years of off-again onagain negotiations that often threatened to degenerate into armed conflict.

Representatives of the two countries, meeting around the clock at the head-quarters of the World Bank in Washington, finally reached agreement on how to share the life-giving waters of the great Indus River system (map), sliced in two by a new political frontier when Pakistan became an independent nation in 1947.

A treaty is scheduled to be formally signed in Karachi on Sept. 19.

• Giant Project—Signing of the treaty will clear the way for the launching of one of the biggest—and politically, financially, and physically most complex—river development programs in history. The project will take 10 years to complete and cost about \$1.3-billion. It will be financed by the Indus River Development Fund, to be administered by the World Bank. Six nations and the World Bank will contribute to the fund, with the U.S. putting up the largest share.

• Great Triumph—For the World Bank, the agreement represents the most spectacular diplomatic triumph of its career, and the first time in history that a major riparian dispute has been mediated successfully by an in-

ternational organization.

The bank, of course, has acted as honest broker in other international political disputes. It tried-though unsuccessfully-to settle the Iranian oil crisis. It played midwife to agreements between Egypt and the Suez Canal Co. stockholders and between the United Kingdom and the United Arab Republic, together ending the Suez crisis. It failed to win for the West the job of building the Aswan Dam, after the U.S. withdrew its support from the project. But with the conclusion of the Indus agreement, the bank's position as a major and unique diplomatic force in the world is firmly established,

• Engineering Problem—The 5,600-mile Indus River system is the largest in the world used primarily for irrigation. Its annual discharge is twice that of the Nile, three times that of the Tigris and Euphrates, 10 times that of the Colorado. Some 47-million people depend upon its waters, directly or indirectly. It irrigates nearly 30-million acres, more than the total irrigated in



the western U.S., four times the acreage irrigated by the Nile.

The engineering problem is essentially one of water diversion on a mammoth scale. Under the agreement, India will get exclusive use of the waters of the three eastern rivers of the system—the Ravi, Beas, and Sutlej, which now flow across the border into Pakisan. The waters of the three western rivers—the Indus, Jhelum, and Chenab—will be partially diverted into the present beds of the eastern rivers.

To accomplish this Olympian task, six huge link canals from 300 to 400 miles long, some with a capacity 10 times that of the Thames, will have to be built in Pakistan. In addition, two big dams, with capacities of millions of acre-feet of water, will be built on the Indus and Jhelum rivers in Pakistan, and a large number of tube wells (to give fresh water to reduce salinity) and other facilities will be put in.

• Long Dispute—Tension began building up over the division of the waters almost from the moment that partition left the dams of the Indus system under Indian control and the controlling canals in Pakistan. Water equals food, and famine never is far away in that part of the world. Both countries heavily fortified areas near key installations, and the danger of war was real

at several points.

The World Bank undertook to mediate the dispute in 1951. But the real turning-point came in 1958. Prime Minister Nehru of India threatened to divert the three eastern rivers by 1962 if no agreement were reached; at about the same time, Pakistan, under Pres. Ayub Khan, got its first government since independence that was strong enough to negotiate a settlement. Recently, Chinese aggression against India has put pressure on Nehru to come to terms.



WALTER HOADLEY, JR., Armstrong Cork Co.: "The economy will be only disappointingly higher for the remainder of the year. A recession, triggered by a downturn in capital spending, will probably hit in the second or third quarter of 1961. It may be severe."



JOEL SEGALL, University of Chicago: "The economy will decline for the rest of the year. Production, prices, and income will drop slowly. And the GNP will drop more than in any past postwar recession. . . . It is likely to last longer if Fed continues to feed money in dribbles."



LIONEL D. EDIE, Lionel D. Edie & Co.: "We are headed downhill; capital spending will be off next year. But the economy should turn around decisively in the second half of 1961 because of a stepup in defense spending, a big government deficit, and a change in monetary policy."

Economists Sing Variations on

Is the U.S. economy on the verge of a recession?

The quotations above are samples of the way professional economists are answering that question these days. Their comments represent the range of opinion of a few dozen of the nation's leading forecasters interviewed by Businesss

Hardly any of the pros are cheerful about the outlook; none at all looks for a boom in 1961. Caution, nervousness, and uncertainty are widespread. None of the economists, to be sure, expects anything resembling the Great Depression of the 1930s. But the majority foresees some sort of slump next year. · Straw Ballot-This over-all view coincides with the results of a straw poll taken last week at the annual meeting of the American Statistical Assn. at California's Stanford University. Fewer than 5% of the 400 economists and statisticians polled at the conference expect any decline in the gross national product by yearend; most think the economy has enough momentum to carry it through Christmas without a general letdown. For the months after Christmas, though, their worries deepen.

Some 75% to 80% of the ASA group think GNP will be no higher by the end of 1961 than it is today. Such a prediction implies a moderate recession during the year. Three-fourths of the economists prophesied that the Federal Reserve Board's index of industrial pro-

duction in 1961 would drop below this year's average; 15% thought it would be about the same as 1960's; only 10% looked for a climb. As for unemployment, 75% to 80% estimated that with the labor force growing rapidly, unemployment would rise to 5-million or more a year from now, compared with just over 4-million in July, 1960.

I. A Question of Degree

The purpose of Businesss Week interviews was not so much to obtain predictions in numerical terms as to detect the pattern economists see emerging—and the underlying reasons for that pattern.

With a few exceptions, this group split into two factions:

Relative optimists, who think the economy is already in a recession. It has been in one, most of these think, since February, 1960 (as the BUSINESS WEEK index suggests). These men view the months since then as a period of readjustment to a new inventory situation (page 74), to sharp foreign competition on both price and quality, and to the end of chronic inflation. This period is now largely over, they believe, and the economy will be climbing more vigorously again by mid-1961, with the help of easier monetary policy and a faster rate of government spending.

Relative pessimists, who regard the past year as only the plateau-like prelude

to a genuine recession early in 1961. These observers anticipate a reduction in capital spending, actual inventory liquidation instead of a mere switch from rapid to moderate inventory building, and weakening demand for autos and other durable goods. A good number see at least the possibility of the worst trouble since the end of World War II.

• Sluggish Housing—Some worry that housing may not help pull the economy out of recession this time, as it has in the three previous slumps.

"The bulls pin a great deal of their optimism on the housing outlook," says Avram Kisselgoff of Allied Chemical Co. "This optimism is based on the fact that mortgage money will be freer during the second half of this year. But this overlooks a basic structural change in the housing market. For the first time, we have run into a situation where demand, rather than the supply of credit, limits housing growth."

Like a number of other worriers, Kisselgoff is disturbed by the rise in vacancy rates, particularly in the South and West, and by reports of a sluggish market—and soft prices—for existing houses. If potential home buyers have trouble getting rid of their present houses, this may spoil the market for new housing.

• Reasons for Trouble—Robinson Newcomb, a leading housing consultant, agrees that housing is unlikely to give



STANLEY RUTTENBERG, AFL-CIO research director: "Since January of this year, the economy has been a plateau. A similar lull in the first eight months of 1957 was the forerunner of the 1957-58 recession . . . we are now in the beginning of the 1960-61 recession."



JOHN LINTNER, Harvard School of Business: "We are not yet in a recession but the boom is getting old and tired; it no longer has a heavy head of steam and no major expansionary forces in the private sector are on the horizon to give a real lift to business in 1961."



RICHARD B. JOHNSON, Southern Methodist University: "This period is a recession from a growth trend and in certain areas it is a recession by any definition... But the downturn is now flattening and may reverse. I think 1961 will be a good business year."

a Theme: Recession in 1961

strong support to the economy during the next half year. For one thing, he argues, two new houses have been added for each new family formed during the last couple of years. So the urgency to buy just isn't there. The only people still unsatisfied, says Newcomb, are minority groups—where the real trouble isn't mortgage terms but a combination of low incomes and social discrimination.

Besides, Newcomb contends, builders have been putting up the wrong type of housing. The demand, he holds, is for small, cheap houses for the young and old. "Just as demand has shifted to the compact car, it is now shifting to the compact house," he says.

Not everyone doubts, however, that housing demand will respond to more mortgage money and lower interest rates. Some point out that early in the 1957-58 recession, the housing industry had the same fears. To be sure, housing starts didn't rise until relatively late in the recession, but when they finally took off, the rise was rapid.

II. Plant and Inventories

Hardly an economist could be found who foresees higher business spending on new plant and equipment in 1961. Lionel D. Edic, whose organization follows this area closely, says his preliminary checks with some major companies suggest capital spending will be off 5% to 10% next year. Despite this downward pressure, however, Edie thinks the over-all economy should be on the way back up during the second half of 1961. To accomplish this, he is counting on the swing from surplus to deficit in the federal budget, growing government outlays on defense, and easier money.

Like Edie, William F. Butler, vicepresident and economist of the Chase Manhattan Bank, expects trouble in capital goods, particularly because of the developing squeeze on profits. Butler forecasts a decline of about 20% in corporate profits in 1961, compared with 1960. He looks for a recession comparable to 1957-58's in duration and intensity; that would put business on the upgrade by the fourth quarter of 1961.

· Inventories-Most of the economists count on today's low ratio of inventories to sales to prevent any recession from being too sharp or deep. The tight money policy of the past made it expensive to carry inventories and curbed the rise of material prices during the period of business expansion; this, the experts think, will pay off as a stabilizer by making it necessary to start rebuilding inventories fairly soon. However, some economists are less cheerful about the inventory picture. They maintain that inventory building has gone on involuntarily in recent months and that there is still room for quite a substantial pulldown should final sales slide.

• Autos—"The big question mark," according to Harvard's John Lintner, is consumer durables. He thinks much depends on the reception of the new compact cars coming from General Motors and Chrysler and on the seriousness of the relative weakening in the used car market as a deterrent to new car purchases. Lintner believes that weight must also be given to evidence in the latest University of Michigan survey of buying intentions that consumers' plans to buy new cars have fallen off since the beginning of the year.

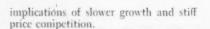
But Detroit and its economic advisers are by no means convinced that auto sales in 1961 won't be at least as good as they were in 1960 (page 23).

III. Too Much Hope?

Many of the economists try to put into words their feeling that hard-todefine psychological factors are spoiling business-and might hurt it even more in the future. One leading economist -who wanted to stay anonymous because he is playing braintruster for one of the Presidential candidates-insists that the forecasts made by economists at the end of 1959 have turned out only a shade too optimistic in numerical terms. But businessmen had generally drawn highly optimistic interpretations from those numerical forecasts. Now they have swung far toward pessimism, as they begin to understand the sadder



PAUL MCCRACKEN, University of Michigan: "Historically, the type of situation that we are now in has preceded a downturn, but the downswing will not be volcanic because inventories do not seem to be overbuilt and the money supply has been loosened in time."



Similarly, Dexter M. Keezer, economic adviser to McGraw-Hill Publishing Co., points to the sobering effect on business of "living without the hypodermic of price inflation." Keezer himself thinks "steady growth and prosperity will be the general rule over the next decade," and says that "between expanding consumer and government expenditure and sales abroad, I expect a larger total volume of business to be chalked up next year than this year."

Walter Hoadley, Jr., of Armstrong Cork Co., thinks this sobering process still has a long way to go among businessmen. Hoadley says management is passing more and more into the hands of people who have never known when the going was really tough, as was the case in the 1930s. Says Hoadley: "Psychologically, we are not prepared for any surprise, and this increases our vulnerability."

Hoadley has never been a professional bear, but he points out that the next population surge won't be felt until the second half of the 1960s. "For the next three to five years," he adds, "we are in for a hard period of adjustment. Management will have to look within its own company or industry to bolster itself, instead of depending on the national economy."

IV. The Federal Role

Nevertheless, action by government is the key to the case made by many economists for a relatively moderate and



ROBINSON NEWCOMB, housing consultant: "Housing will not give strong support to the economy in the next six months . . . The market is now in low-cost housing, and builders have not yet adapted. Just as demand has shifted to the compact car, it is shifting to the compact house."

short recession. William R. Biggs, vice-president of the Bank of New York and chairman of the Brookings Institution, finds that "barring some dramatic development the prospect is for a decline in 1961, which should be held to postwar recession limits because of the certainty of a new and higher level of government spending." But he sees no possibility that a boost in government spending will come soon enough—or be large enough—to head off the decline.

Easier Money—The case for a moderate and short-lived recession also depends, of course, on hopes for easier money. The Fed has already eased the money supply, but there's still a lot of disagreement among economists as to whether it has acted decisively enough yet.

Those who say it hasn't argue that the Fed's action in the last two months, coming after a period when the money supply was shrinking, has been too little and too late—too little because it hasn't completely offset the drop in the money supply, too late because it hasn't come quickly enough to arrest such cumulative forces as the decline in wholesale prices and the drop in residential construction.

On the other side, some expect that the Fed's swing to ease will halt any dip. The important thing, they say, is that free reserves now are positive, that the discount rate has been cut, and that the banks are in a position to follow a substantially more aggressive loan policy.

• Middle Way-To some observers, it seems that the Fed has been trying



JAMES A. MCCULLOUGH, Scudder, Stevens & Clark: "The major negative forces which have held back the economy are abating. From now on, we expect a lessening in the rate of steel inventory decline, a moderate increase in defense spending, no further decline in housing."

to steer a middle course between what it did in the 1953-54 recession and what it did in the 1957-58 slump. In 1954, the Fed's policy of very active case boosted the money supply too rapidly and helped kick off a round of inflation.

In 1957-58, according to most economists, the money supply wasn't eased enough to facilitate a really vigorous upswing.

Fed economists and policymakers themselves are keeping their mouths tightly closed about what they are trying to do this time—and about the forecast on which they are basing their retions.

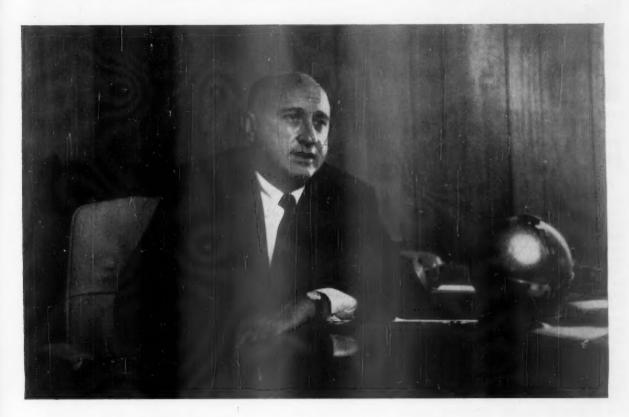
It is perfectly clear, however, that the Fed is not expecting a strong expansion or an inflationary price trend. In setting its policy, the Fed quite plainly is leaning against any wind coming from the general direction of recession.

In this, the Fed's thinking seems closely attuned to the majority view among professional economists. Paul McCracken, professor of business conditions at the University of Michigan and a former member of Pres. Eisenhower's Council of Economic Advisers, summarizes it this way:

"Historically, more often than not, the type of situation that we are now in has preceded a downturn."

Nathan Koffsky, a leading forecaster in the U.S. Dept. of Agriculture, agrees that the odds are building up in favor of a recession in early 1961. He dourly adds: "Even though economists are looking for a recession in early 1961, it may actually come true."

Long Distance pays off in extra sales



"We acknowledge every order with a Long Distance call"

reports Marty Freedman, president,
"Arlene of Hollywood"—Calif. sportswear manufacturer.

"Not only is it a courtesy that's appreciated by the customer," adds Mr. Freedman, "but it gives us a chance to discuss and merchandise additional items. On perhaps 20 to 30 per cent of such calls, we actually make additional sales while we're on the phone."

Telephoning your thanks to customers is a proven salesbuilding idea—and it opens the door to bigger orders.

Long Distance pays off! Use it now . . . for all it's worth!

LONG DISTANCE RATES ARE LOW

Here are some examples:

Philad	elphia to	Washi	ng	to	n,	D	.C.		0	۰	65¢
Detro	it to Pittal	ourgh							0		80¢
New !	York to Co	lumbu	18,	0				0			\$1.25
Denve	er to Chica	go .									\$1.55
Los A	ngeles to I	Boston									\$2.25

These are day rates, Station-to-Station, for the first three minutes. Add the 10% federal excise tax.

BELL TELEPHONE SYSTEM





COUSINS UNDER THE SKIN, and the same skin-stainless steel. This 1936 Ford and 1960 Thunderbird were specially built as . . .

Rolling Ads for Stainless

One day in the mid-1940s, William McFadden, a district man for Allegheny Ludlum Steel Corp., drove down a busy Chicago street in a 1936 Ford that looked in unusually good shape. Ist shiny unpainted body seemed to have just come off the assembly line. But when McFadden stepped on the brakes, his foot went right through the car's floor, and he barely avoided a pile-up. The floorboards of the deceptively newlooking auto had completely rusted away, after 10 years and more than 200,000 miles of hard use.

Why was the body of the old car still like new, though its floor was shot? A closer look showed the answer: The floor pans were made of ordinary carbon steel, but the body, built to last virtually forever, was made of stainless steel, one of the most durable commercial metals.

• Good Advertising—The Ford was one of a half-dozen 1936 models that the company—then Allegheny Steel Co.—had specially built as part of a sales promotion campaign.

Even in the 1930s, stainless steel was almost as mysterious a substance to most people in this country as plutonium is nowadays. By having some of its executives and salesmen in several large cities drive around in stainless Fords, the company figured it could make the public more familiar with this handsome metal and, at the same time, illustrate its possibilities to manufacturers. After the cars were built, their bodies were left unpainted to show stainless steel's looks and resistance to corrosion and weather.

 One-Horse Shay—Allegheny Ludlum got a lot of publicity mileage out of the '36 Fords. Their stainless bodies remained like new as years and tens of thousands of miles passed. Finally, though, the engines, transmissions, and other parts made of conventional materials began to show the wear and tear.

The car McFadden drove is an example. Another was known to have gone through four engines. By the end of World War II, the company had put the stainless auto program to pasture, figuring the cars were beyond mechanical repair.

• Revived This Month—Allegheny Ludlum was in no hurry to revive the program—stainless bodies are hard to fabricate and devilishly expensive. But in recent years, the company has realized it was losing out on a good promotion device. So around 1956, Allegheny Ludlum began planning to revive the 2+year-old program. For one thing, it could aid the steel industry in its fight against aluminum's increasing penetration into the auto parts market.

This month, it is showing off the results—two spanking new stainless steel 1960 Thunderbirds. One of these is being exhibited at the Allegheny County Fair in Pittsburgh this week, and the other is based in Detroit. Soon, the two new T-Birds will be seen at auto shows and dealer promotions around the country.

• Years in Building—These latest stainless Fords took almost four years to complete. There were difficult problems to solve. For instance, some of the stainless sheets needed were too broad to be rolled in the usual way. So they were "pack rolled"—that is, a number of thin stainless plates were painted with a compound to prevent them from sticking together, and placed inside a couple of carbon steel plates. Then the whole thing was welded shut and rolled on a plate mill.

The Budd Co.'s Detroit plant fabricated the T-Bird bodies out of Allegheny Ludlum's Type 302 stainless, a nickel-

bearing grade. They were given a satin surface finish, similar to that of stainless architectural paneling.

It's because stainless is a lot harder to work than carbon steel that Allegheny Ludlum didn't get its T-Birds completed until late this year. Ford Motor Co. wouldn't finish the job until the end of its own 1960 production run—it was worried about damaging the dies before all of its own regular models were off the lines.

Allegheny Ludlum remembered the McFadden incident—this time it had the floor pans made of stainless steel, too

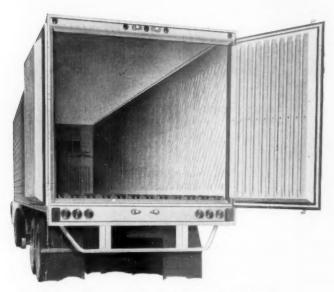
• Collectors' Items—What happened to the '36 Fords after World War II? Mostly, they fell into the hands of collectors. For instance, Thompson Products, Inc. (now part of Thompson-Ramo-Wooldridge) bought one for display in the company's Cleveland museum. Another was bought by Dr. Jerome Vlk, a Chicago orthodontist who pioneered the application of stainless steel wire for straightening teeth.

When Allegheny Ludlum began thinking again about the promotional value of stainless steel cars, it managed to buy one of the '36s back from an individual owner. Just recently, it tracked down another in Texas and bought it back—it's on the way east right now. The company plans to team them up with the two T-Birds—the old cars to illustrate stainless steel's durability, and the new to emphasize its good looks in a modern setting.

Don't run down to a Ford dealer with the expectation of ordering one of these shiny stainless T-Birds. They cost too much for commercial production. Allegheny Ludlum won't tell exactly how much, but the two cars are insured for \$25,000 apiece.



Consolidated Freightways uses FRUEHAUF REEFERS on Transcontinental Runs!



- Interchangeability—from all-aluminum to all-steel
- Higher cube Full loading width Greater inside height
- Dozens of options One-piece aluminum roof Five insulation systems • Three different floors • Five models to choose from!

Consolidated Freightways has added 75 new 1960 Fruehauf refrigerated Volume *Vans to its transcontinental reefer fleet. Consolidated officials report favorable shipper reception of the new reefers with frozen and perishable products arriving in top condition after long runs.

Fruehauf builds reefers for every type of service. So, whether your hauls are transcontinental or city-to-city Fruehauf has the unit to do your job better! Fruehauf's wide selection of reefer models gives you the right reefer to meet your operating conditions in size, weight, cost, construction and insulating efficiency. Ask your Fruehauf Branch salesman to show you the most complete visual presentation in the industry!

If It's A Fruehauf You Get More-So You Pay Less!



FRUEHAUF TRAILER COMPANY

10940 Harper Avenue, Detroit 32, Michigan 5137 South Boyle, Los Angeles 58, California

In Business

Airlines Seek to Narrow Fare Gap By Boosting Charges for Coach

To arrest the shift of passengers from first class to coach service (BW-Aug.27'60,p42), the major airlines are asking CAB for coach fare increases. They want to narrow the gap (as much as 35%) between the two classes of service, especially where both are offered on the same jet planes.

Airline officials say it isn't only the tourist who is taking advantage of the bargain rates. It's also the businessman who's under pressure to practice thrift in his

expense account.

In 1955, coach traffic accounted for 34% of passenger business; last year it was 42%, and in July it passed the 50% mark for the first time.

To make the 13 subsidized local service airlines more attractive to equity capital, CAB dropped its rule allowing only a 9.5% return on investment, in favor of a sliding scale from 9% to 12.75%. The board said the lines need a heavy infusion of capital to balance their debt structure and to pay for expansion and new planes. In the last fiscal year, the lines drew \$49.5-million in subsidies, based on the 9.5% return on investment.

Dow Chemical-Allied Labs Merger Heads List in an Active Week

Merger plans kept the wires humming this week. Some marked real diversification moves, some were little more than bookkeeping changes, and a moderately big

one fell through.

Directors of Dow Chemical Co. and Allied Laboratories, Inc., Kansas City pharmaceutical house, agreed on an exchange of stock that would leave Allied a division of Dow. If Allied holders approve on Nov. 30, they'll get two-thirds of a share of Dow common for each share of Allied. Dow's annual sales run above \$781-million, Allied's above \$30-million.

Merger of General Transistor Corp. into General Instrument Corp. was approved by holders of both companies. Terms call for 7/10 share of General Instrument common for each share of General Transistor.

Two pairs of companies under common control de-

cided to make their marriages official:

• Seabrook Farms Co. into Seeman Bros., Inc., an absorption by merger that has been in the cards since Seeman bought 78% of Seabrook's stock more than a year ago (BW-Jun.6'59,p93). Seeman, a wholesale grocer that owns the Premier and White Rose labels, came into Seabrook's life after a family fight in which Charles Seabrook tried to oust three sons from management. Seeman arranged to pay off a Seabrook bank loan, paving the way for dissolution of a voting trust into which Charles Seabrook had put his majority

interest. After buying this stock, Seeman replaced the younger Seabrooks with its own managers. Seabrook packs frozen fruits and vegetables under its own name and under the Snow Crop label.

 Rockcote Paint Co. into Valspar Corp. Ralph J.
 Baudhuin, chairman of Rockcote, acquired more than 25% of Valspar's common this summer and was named

president of Valspar in July.

The shadow of a Federal Trade Commission antitrust complaint about previous mergers chilled Union Bag-Camp Paper Corp.'s negotiations to acquire Crossett Co., a big papermaker in Arkansas, for about \$156-million. FTC has challenged the 1956 merger between Union Bag and Camp Paper and four subsequent acquisitions (BW-Jun.25'60,p138). This week Union Bag withdrew its offer and Crossett announced it is no longer for sale.

Chrysler Retaliates Against Dann With \$30-Million Libel Suit

Chrysler Corp. this week tried to turn the tables on Sol A. Dann, Detroit attorney who has filed three suits against the company. Chrysler sued Dann for \$30-million, alleging libel in his statements at the annual

stockholders' meeting last April.

This makes six court actions that have arisen from the company's conflict-of-interest scandal: three by Dann (for a copy of the stockholder list, for a receiver while evidence of fraud is being acted upon, and for cancellation of executive bonuses); one by Chrysler to recover money from deposed Pres. William C. Newberg and Ben Stone, his partner in a parts manufacturing company; one by a New York stockholder for a look at Chrysler's books, and now the libel suit against Dann.

Meanwhile Dann warmed to battle with the comment that if Chrysler Pres. L. L. Colbert doesn't resign, "he will have more suits on his hands than Hart Schaffner &

Marx.

Business Briefs

A general freight rate increase, which industry sources estimate at around 1%, was worked out this week by rail traffic executives assembled in Chicago. ICC approval was expected. But rail men themselves started talking immediately about selective rollbacks in rates to hold business against competition.

The Carolinas are getting their first steel furnace and rolling mill. Florida Steel Corp. of Tampa announced plans to build a \$3.3-million mill on the outskirts of Charlotte, N.C., to produce reinforcing bars. Annual capacity is 51,000 tons. The mill will obtain steel scrap from the Carolina area for use as feedstock for the furnace.

The electrical equipment antitrust trial in Philadelphia set for Sept. 19 (BW-Aug.27'60,p42) has been post-poned to Oct. 31—"a pretty final deadline," the court said. General Electric Co. and Westinghouse Electric Corp. are charged with conspiring to set prices and allocate business in power switchgear assemblies.



for the purchase of equipment under long or short term leases are readily available.

Boothe leases all types of machinery and equipment costing from \$5,000 to \$5,000,000 to companies with a net worth of from \$100,000 to over \$1,000,000,000.

Boothe emphasizes flexibility and imagination in tailoring lease contracts to meet your specific requirements. Leases may range from two to fifteen years in term. Rental payments will be arranged to meet your needs. Selection of equipment, vendor and price is in your hands. Boothe does the rest.

With the background of experience gained in leasing over \$45,000,000 of equipment, Boothe is in an excellent position to advise you how you can achieve your company objectives through leasing.

Find out more about why it pays to lease from Boothe. Write, wire, or phone any Boothe Leasing Corporation office. We have them coast-to-coast.

REPRESENTATIVES IN

Chicago Atlanta Boston Denver Cleveland Houston Akron Wausau



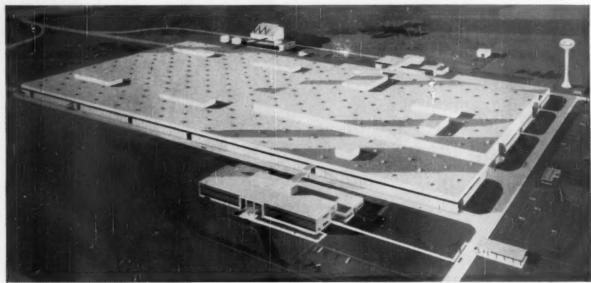
315 MONTGOMERY STREET SAN FRANCISCO 4, CALIFORNIA • EX 7-4330

Eastern Division Office: 666 5th AVENUE, NEW YORK CITY . CI 5-2230

America's Most Experienced Leasing Specialists

NEW CHRYSLER CAR-A-MINUTE ASSEMBLY PLANT





ADMINISTRATION BLDG. — Architects and Engineers: Svendrup & Parcel, St. Louis • General Contractor: Fruin-Colnon Contracting Co., St. Louis ASSEMBLY BLDG. — Albert Kahn, Associated Architects and Engineers, Detroit • H. D. Tousley Co., General Contractor, Kirkwood, Mo.

Designed to hold down upkeep...equipped with JENKINS VALVES

Chrysler Corporation's St. Louis assembly plant serves the midwest, employs more than 4000 in building Valiant, Plymouth, Dodge Dart and new Dodge Lancer cars. Seven buildings include a 1.3 million square-foot manufacturing building and a U-shaped administration building of reinforced concrete columns and girders, with pre-cast concrete floor and roof deck.

Designed to be "the nation's most modern automobile manufacturing facility," this huge new plant also represents an all-out effort to make it a record-breaker in terms of low upkeep.

That Jenkins Valves would minimize valve maintenance and replacement costs was assured by the service records of Jenkins Valves in other Chrysler Corporation plants.

By installing Jenkins Valves to control customary service lines and the extensive paint carrying system in the St. Louis plant, Chrysler guaranteed dependability and economy. Yet, the Jenkins Valves cost no more.

You can take the gamble out of valve costs with one word in your specifications or purchase order . . . the word for economy: "JENKINS." For information about specific valves, ask your local Jenkins Distributor or write—Jenkins Bros., 100 Park Ave., New York 17.



Jenkins Gate Valves control lines carrying paint as well as plumbing, heating, air conditioning.



Sold Through Leading Distributors Everywhere

WASHINGTON OUTLOOK

WASHINGTON BUREAU SEPT. 3, 1960



An appraisal of the bob-tailed Congressional session:

The record of legislative accomplishment is thin. The coalition of Republicans and Southern Democrats blocked the Democratic liberal program of Presidential nominee John F. Kennedy at every important turn.

It demonstrates again the deep rupture in the Democratic Party, one that complicates the Kennedy campaign strategy and encourages the Republicans to map a hard fight in the entire South.

Finally, it foreshadows bitter legislative battling in 1961 between the Congress and a new President, whether Sen. Kennedy or Vice-Pres. Richard M. Nixon. The controversial priority issues of August were not resolved. They survive to be fought over again next year.

This goes for medical care for the aged, as well as stimulation of housing, aid for education, reform of basic agricultural policy, and raising the minimum wage and extending its coverage. The effort to put old folks' medical care under Social Security will continue, despite August passage of a limited "charity" bill tagged onto existing public welfare programs administered by the states.

The impact of the August session upon the Presidential election is open to dispute. However, it is generally agreed hereabouts that the apparent winner insofar as any short-term gain is concerned is the Republican nominee, Nixon.

Nixon was confined to Walter Reed Hospital with an infected knee as the session came to its end. But associates say he is pleased with the session's effect—especially its illumination of the schism between North and South in the Democratic ranks.

While Nixon recuperates, Kennedy hits the road. Kennedy prepares to blame Republican obstructionists publicly for the slim Congressional accomplishment, but privately he seethes at conservative Southern Democrats who contributed to his August miseries. One morsel of good—or, at least, better—news for Kennedy did come this week. The latest Gallup Poll shows he has pulled even with Nixon in public popularity. Kennedy had trailed by six points in the prior poll.

Kennedy's patience with Southern Democrats is wearing thin. In the Senate, his Southern colleagues ganged up against Kennedy's bill to tie medical care for the elderly into the Social Security system. Conservative Southern Democrats on the House Labor and Rules Committees helped Republicans to scuttle Kennedy-backed labor, school, and housing bills.

No single Southern state is considered absolutely safe for Kennedy in the coming Presidential election. This is the opinion of most Southerners in Congress, who cite two primary reasons:

The Democratic platform, which Kennedy virtually dictated, is "too liberal" in over-all tone, and the "toughest ever" plank of civil rights is regarded as harshly anti-Southern.

In large part, this explains the refusal of Congressional Southerners to adopt a compromising attitude toward the list of "must" legislation that Kennedy wanted out of the ill-fated August session.

Kennedy's Roman Catholicism looms larger and larger as a crucial factor. The anti-Catholic campaign now being fomented in the South, the Border States, and much of the Midwest may ultimately redound to

WASHINGTON OUTLOOK (Continued)

WASHINGTON BUREAU SEPT. 3, 1960 Kennedy's benefit. But at present it seems to be every bit as deep as the 1928 anti-Catholic wave that damaged Al Smith's bid for the White House.

Kennedy's Southern campaign plans are vague. As Congress was in the process of winding up, the notable omission in Kennedy's travel plans was a personal appearance anywhere in the Deep South. This probably will be remedied later, but Kennedy gives no appearance of willingness to extend himself to woo the cold South.

The Kennedy-Lyndon Johnson relationship is under some strain. On the surface, it still seems easy and tranquil enough. But behind-scenes there are rumblings of discontent. They come mainly from the Kennedy camp, which appears to suspect that the Texan's presence on the ticket may not bring the hoped-for political rewards.

The Senate vote on Kennedy's medical care bill contributes to the uneasy feeling. Some of the Kennedy people are complaining privately that "Lyndon doesn't lose the close ones like this—if he really wants to win." What they feel, but obviously cannot prove, is that if he had really pulled the stops, Majority Leader Johnson could have come up with the four switch votes necessary to make Kennedy's 51-44 defeat on the medical care roll call a 48-47 victory instead.

Mounting evidence of Southern and Midwestern disaffection, which Johnson was counted on to forestall, is another factor. And some local political leaders in the South, who had favored Johnson for the top spot, are not working for the Kennedy-led ticket.

Johnson helped squash a Kennedy broadside on civil rights within the last two weeks. Kennedy and his advisers drafted a statement that, in effect, challenged Southern Democrats to get in line or leave the party. It pledged Kennedy to a civil rights program that, insiders say, would be even tougher than that proposed in the Democratic platform.

In concert with several influential Southerners, Johnson persuaded Kennedy to reconsider the language. Kennedy then called off a news conference he had planned for the sole purpose of releasing the civil rights statement. As of the middle of this week, the statement was described as still in the process of being redrafted.

Nixon's campaign plans move ahead, despite his hospitalization. In the first few days of his enforced idleness, Nixon has been paying special attention to the farm problem.

Two major farm addresses are on his September agenda—at Guthrie Center, Iowa, on the 16th; at Sioux Falls, S. D., on the 23rd.

An advance report on Nixon's farm program suggests it will have two main bases. The first is that farm price supports are a necessity, at least to provide a floor under the agricultural economy. The second is that more effective regulation is required—that is, either tighter production controls or lower prices, or both, as necessary to shut off surplus production of a given commodity.

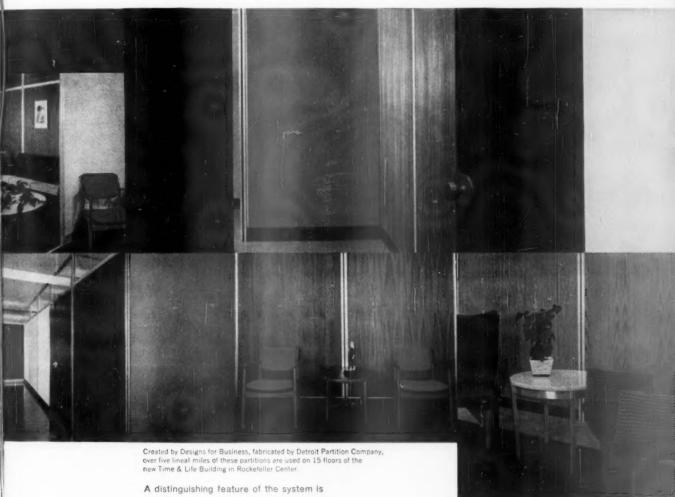
Nixon's difference with Agriculture Secy. Ezra T. Benson shines through in the first point. Benson's basic goal was removal of federal intervention or regulation as a dominant influence in the agricultural economy.

Contents copyrighted under the general copyright on the Sept. 3, 1880, Issue—Business Week, 330 W, 42nd St., New York, N. Y.

INSTANT DECOR

Speed of installation and infinite design options highlight this moveable partition system based on extrusions of Olin Aluminum

In less than one hour, any office on this page can be changed completely-new walls, doors, transoms, fixtures and furniture, new floor plan and size-by two men armed with nothing noisier or more work-disruptive than screw drivers. A moderate-size work force can revamp the layout of an entire floor overnight. And speed of original installation-in new or existing buildings-equals anything on the market. Option of decor is all but limitless. Wall panels and transoms may be glass, wood, vinyl, patterned metal, or burlap. Color combinations to suit any taste.



its integral, clip-in lighting and shelving. Vital to the system are aluminum extrusions of custom design. Working with both designer and fabricator, Olin Aluminum contributed to the extrusion design, made the dies, produced and shipped the extrusions to meet exacting deadlines. For more facts, write Olin Aluminum, Architectural Sales.





New paper withstands 90% humidity for 360 hours

(More packaging news from International Paper)

Read how this new moneysaving kraft paper withstood two weeks of constant high humidity.

To prove the moisture-resistant quality of International Paper's new Hy-poly kraft, we subjected it to this severe test.

The Hy-poly bag was filled with an extremely hygroscopic chemical and steamed in 90% relative humidity at 100° F. for 360 hours. (Unprotected, under these conditions, the test chemical takes on $2\frac{1}{2}$ times its weight in water in about one hour.) When the bag was opened, 15 days later, the crystals were as dry as sand.

New Hy-poly not only resists humidity, it saves you money, too. From \$2 to \$16 per thou-

sand multiwalls. And with a coating about *half* as thick as medium- and low-density sheets, you get equal, if not greater, moisture-vapor protection.

Hy-poly is available in both bleached and natural Gator-Hide_® kraft and in our new Gator-Hide Extensible Kraft.

The constant development of new packaging papers requires vast resources, skilled craftsmen and modern facilities. We have all three.

That is why International Paper can provide you with the widest range of papers, boards and packaging assistance in the industry. Call us or contact your converter—he's probably been doing business with us for years,





INTERNATIONAL PAPER New York 17, N. Y.

Manufacturers of papers for magazines, books and newspapers • papers for home and office use • converting papers • papers and paperboards for packaging • shipping containers • folding cartons • milk containers • multiwall bags • grocery and specialty bags and sacks • pulps for industry • lumber, plywood and other building materials

In Finance

Cut in Prime Rate Fails to Set Off An Increase in Business Borrowing

A few bankers may have believed that reduction of the prime rate last week from 5% to 4½% would lead to an immediate increase in business borrowing. If so, they

were disappointed.

A BUSINESS WEEK survey of key lending officers at leading commercial banks this week showed little, if any, response by business to the cut in the prime. Loan demand remains slack, as it has been since midyear. "I'm beginning to doubt if there will be any seasonal pickup this year," says a senior officer at a big New York wholesale bank that specializes in lending to business.

Since the first week of July, business loans at the Federal Reserve's weekly reporting member banks, accounting for over 75% of all business loans, have declined \$531-million. This compares with a \$430-million increase

in loans during the same period a year ago.

Bankers say that demand for short-term business loans is primarily a function of business conditions, and has little to do with the cost of credit. "If a company is big enough to qualify for the prime rate then borrowing cost doesn't matter," says the vice-president of a big New York bank.

Zeckendorf Sells New York Site And Interest in Los Angeles Project

Webb & Knapp, run by financial operator William Zeckendorf, worked overtime this week to reduce its debt burden and ease the pinch caused by its shortage of cash. It disclosed that Aluminum Co. of America will acquire a 40% interest in 91091 Corp., the W&K subsidiary handling the \$300-million Century City development in Los Angeles. It also announced sale of its Roxy Theater property on Manhattan's West Side to Sommer Brothers, a real estate development outfit, which plans to build an

office building on the site.

Alcoa says its participation in Century City results from its interest "in development of new uses for aluminum in apartment housing and other structures." Its entry into the deal came a few weeks after Webb & Knapp had negotiated a new agreement with directors of Twentieth Century-Fox for purchase of the 265-acre tract. In May, 1959, W&K had first agreed to buy the land for approximately \$56-million over a 10-year period, but it later announced it was selling its option to Kratter Corp. (BW-May21'60,p167), which was to pay cash for the land.

When Kratter withdrew a few weeks later, W&K got approval from Fox directors for a new cash deal of its own, pending approval by stockholders of the movie

According to a W&K man, the money Alcoa advances, both now and later to close the deal, will not necessarily be in direct proportion to its proposed 40% ownership interest in the project.

MORE NEWS ABOUT FINANCE ON:

 P. 44—Central bankers get concerned about the flow of hot money.

As for the Roxy sale, it marks the fourth disposition of Webb & Knapp holdings in the West Side Manhattan midtown in the past two months. With the latest sale, W&K has disposed of over \$22-million worth of Manhattan properties.

Service of the servic

New Rules Give SBICs Freer Hand For Investing in Equity Securities

The Small Business Administration this week issued new regulations which eased restrictions on investments in equity securities by small business investment companies (SBICs). These moves came after Congress, acting on complaints about the inadequacy of the law, made changes in June in the Small Business Investment

Act of 1958, which covers SBICs.

Until now, financing activities of SBICs have been limited to making long-term loans and purchasing unsecured convertible debentures. Under the new regulations, SBICs may now follow "normal" investment practices in financing small business. They may purchase secured debt securities that carry conversion privileges, debt that has either detachable or nondetachable stock purchase warrants or options, or any class of stock with or without warrants, options, or conversion privileges.

At the same time, the SBA has dropped a regulation that required a company obtaining equity capital from a small business investment company to invest from

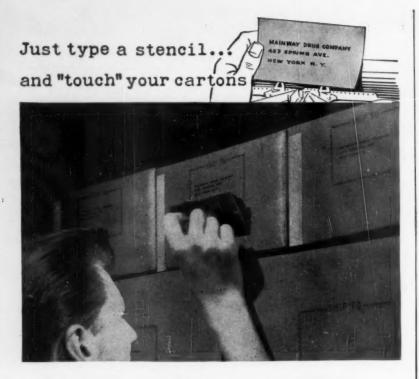
2% to 5% of the amount in the SBIC's stock.

SBA officials expect the new provisions will lead to increased activity for SBICs and to greater interest in formation of new ones. However, some observers point out that equity investments have always been available indirectly via purchase of convertible debentures, and predict that most SBICs will continue to deal mostly in them.

Finance Briefs

Shareholders of Honolulu Rapid Transit Co., one of Harry Weinberg's collection of city transit companies (BW-Jul.10'60,p84), have had to swallow a stiff dose of medicine. HRT's board has voted to omit preferred and common dividends normally paid Sept. 15, and a letter to shareholders suggests there's little chance for a change unless the company wins a fare increase.

Dividend cuts are coming at a faster pace as companies get a second look at what the shrinkage of profit margins is doing to earnings. Last week, Montgomery Ward halved its dividend to 25c in order to preserve its cash, In addition, Continental Copper & Steel Industries reduced its payment, and Davco omitted its dividend. This follows August cuts by Scripto, Consolidated Freightways, ITE Circuit Breaker, and Bridgeport Brass, among others, as well as omissions by Lockheed, Merritt-Chapman & Scott, and Foote Mineral.



Fastest, easiest way to address your multiple carton shipments

Weber "Touch-Stenciling" replaces labels and stencils boards. It's fast, neat and systematic

Want a quick, easy way to address shipping cartons? Then try this new Weber "Touch-Stenciling" system—means no more stencilboards, rubber stamps or label typing.

Shipping cartons, pre-printed with "Ship-To" label frames, are addressed by simply printing the customer's name and address within the frames with a Web-O-Print hand duplicator. It prints from a stencil that you can type or handwrite. Just a "touch" on the carton leaves a clear, sharp, permanent print.

With a smooth, one-hand motion 40 to 50 cartons can be addressed in a minute. After the shipment is addressed the stencil is thrown away, saving filing time and space.

Weber stencils can be prepared as part of your order-invoice writing procedure to save time and eliminate shipping errors. They can be cut as a by-product of forms typing on manual or electric typewriters, automatic accounting machines and other modern office equipment.

FREE BOOKLET TELLS SAVINGS STORY!
Write today for new booklet—How to Save Time and Money with "Assembly Line" Shipment Addressing.

V	Ve.	be	r
	BELLE		

Sales and Service in all principal cities

WEBER MARK Dept. 1-15	CING SYSTEMS, IN	ic.
Weber Industr Mount Prospe		ANIFERINA
Send me your Addressing St	bulletin on "Asse	embly Line"
Company		
Individual		
Position		
Address		

Flight of

Hot money and haven money are pouring from New York to London and Frankfurt, arousing fears of domestic and international complications.

There's been a big increase this summer in international capital movements—the flow of money from one country to another (map). Some of it is "hot" money—highly liquid funds out for the highest possible yield on a short-term basis. Some of it is "haven" money, which prizes safety of capital over yield or potential gain.

This week, both hot money and haven money is flowing out of New York to Europe, particularly to London and Frankfurt. Similarly, money is making its way out of Belgium, Cuba, Mexico, and the Union of South Africa. The tide has reached such proportions that the German central bank has taken steps to stem the influx; so have the Swiss, whose country is the traditional haven for flight capital.

• Speeding the Flight-Most of the capital leaving the U.S. comes into the category of hot money lured by the high yields available in foreign money markets. (American corporations with surplus cash available are among those switching their funds overseas.) With the Federal Reserve following more of an easy-money policy, most short-term Treasury obligations yield about 2½%. In contrast, short-term securities in London are yielding more than 5½%, so that even when investors hedge against a future decline in sterling, the spread in rates favors a flight from the dollar.

But a good deal of the flow of international currency is seeking safety above all. This is apparent from the influx of funds into Switzerland, where open market rates are below those prevailing anywhere else. (The bank rate in Switzerland is only 2%.) Since July, some \$250-million in foreign funds has moved into Switzerland, chiefly from Belgian investors who, upset by the Congo crisis, feel that their own franc is in a risky position.

There's little obvious sign that the flow of dollar funds abroad represents haven capital. But a portion of the outflow is considered to be in this category by bankers. They say that some of their foreign clients, who used to think of the U.S. as safe a repository for their funds as Switzerland, now feel that there is a danger of devaluation of the dollar, and would rather have either gold or foreign securities.

Moreover, a good deal of money that

Capital Abroad Worries Bankers



used to flow into the U.S. from countries like Mexico, Cuba, and Venezuela, is now going abroad, and this represents a loss of haven capital.

• Gold Bid Up—The big shift in currencies is also reflected in the London gold market, where the price of gold last week was bid up to \$35.15 per oz., the highest level since free trading in gold reopened in March, 1954. (The U.S. Treasury buys gold at \$34.9125 per oz., sells it to foreign governments and central banks at \$35.0875 an oz.)

British gold dealers report that the rise in the price is largely due to buying by European central banks, which have had a big increase in their holdings of dollar assets, normally exchange part of their dollars for gold, but hesitate to intensify the drain on the U.S. gold stock

• Danger in the Air-Ever since most foreign currencies became convertible with the dollar in January, 1959, there has been a steady rise in the flow of hot money. Normally, central bankers aren't bothered by such shifts. They regard them as temporary and, in time, self-reversing; for when money flows to one area from another because of a spread in interest rates, the demand that is created eventually narrows the spread.

This time, however, central bankers are clearly worried. For the flow is not simply a case of investors being lured by high rates—there's also a great deal of scare capital on the move. There's real fear that if the U.S. economy weakens, something more like a flood of capital would go abroad.

• Mostly Tight Policies—Most European countries are enjoying a full-fledged boom, one that has them concerned about inflationary pressures on prices and wages. That's the reason their central bankers, almost without exception, are pursuing rigorous tightmoney policies. The influx of foreign funds, particularly dollars, is an embarrassment, for it brings an excessive and inflationary liquidity to their banking systems.

If the flow of hot money continues,

bankers feel that it could be a major factor in shaping domestic monetary policies. It is already having just this effect in Germany and Switzerland, where the influx of funds is adding to bank reserves at a time when authorities are seeking to cut down the amount of credit available. (German banks, for example, have recently agreed to a freeze on some of their reserves by subscribing to a special issue of 2-year Treasury bills at 51%. And Holland has a new arrangement that takes away some of the profit incentive of the Dutch banks; they have to put up special deposits if they make loans at a faster rate than deemed desirable.)

· Self-Protection-Under the prevailing conditions, most foreign governmentsand their central banks-give priority to the domestic situation. So does the Fed. That's why it is easing credit now, bringing down rates in New York's money market, despite the fact that this means losing funds to highvielding money markets in foreign coun-

But foreign governments must protect themselves, too. With their economies running full-tilt, they have to tighten credit in order to keep inflationary pressures from getting out of hand. This means high interest rates, which attract foreign funds and particularly dollars. The result is an exaggeration of the spread between U.S. rates and those overseas-and a step-up

in the flow of funds.

· To Adjust Itself-The Fed and the U.S. Treasury are confident that the current outflow of dollars-and of gold -will not be a serious or permanent problem. The nation's money managers feel that the sharp divergence in economic activity between the U.S. and Europe cannot continue indefinitely. They say that as long as our trade balance-as distinct from our over-all balance of payments position-remains healthy, the outflow of funds is eventually bound to reverse itself.

These officials concede that there is little prospect for such a change over the next six months-perhaps even longer. But the majority are confident that today's increase in the outflow of short-term capital funds is not serious. They regard it as being a "normal" reflection of current conditions-the U.S. balance of payments deficit and the spread in international rates brought about by a boom abroad and a sag at

home.

As one Fed official puts it: "The trouble is that we haven't been living in a normal world. Now we are, and a lot of people regard it as abnor-

· Bankers Worry-While the Fed is confident, some bankers here and in Europe are not. They point out that the U.S. has lost some \$290-million in gold in the past few weeks. If the flow continues at anything like this rate, they say, it might make central banks abroad afraid that the U.S. can't stand the drain and lead them to demand more gold-and thus create an international currency crisis.

So far, there is no sign that this is happening. Most foreign central bankers look upon dollars as their secondary reserves; they don't want to put the U.S. under pressure that would mean retaliatory action. If the U.S. were forced to devalue the dollar in terms of gold, world trade might have to

The Fed says that it is closely watching the drain on our gold supply. Says one spokesman: "It causes no alarm." But, he adds, "of course, any outflow of capital carries a threat-there's always the feeling that something bigger could

be touched off."

The Fed also is asking its member banks to look into the extent and causes of short-term capital movements that haven't been recorded as noteworthy. The facts won't be available for several months, but theer are indications of substantial outflows that have not been reported-mostly into London and, to a lesser extent, to Canada, Germany, and Switzerland.

The Fed's relatively passive stand is in sharp contrast with that of European bankers, who are worried about the instability that the upsurge in capital

movements has created.

· Swiss Situation-The Swiss are a case in point. The Swiss banks have signed a gentlemen's agreement that puts a number of restrictions on foreign accounts opened after July 1. Two of the most severe: New depositors will have to pay 1% interest quarterly plus banking charges, and withdrawals of foreign funds will require three months' notice. (U.S. bankers doubt that the Swiss will be able to enforce the latter rule, how-

The Swiss are taking a leaf from the Germans, the most orthodox of the central banking fraternity, who had already slapped restrictions on short-term capital movements. The Germans stopped interest payments on foreign deposits in German banks and on foreign holdings of Treasury bills.

· Loopholes-The clampdown, though, has a number of loopholes. For example, it doesn't block repatriation of funds-and the volume of short-term assets is still rising. There has also been significant buying of German securities by speculators who-perhaps wishfully -expect the Germans eventually to increase the value of the deutschemark relative to the dollar and other currencies. In effect, they are taking a long shot bet on revaluation of the German mark.

So the Germans have taken further

steps. The Bundesbank is now offering a premium of 1% on currency switches from D-marks into dollars. This is to encourage German banks to lend abroad and to discourage German industry from borrowing abroad to finance im-

· Flow to London-The British feel they are suffering the most. Since the Germans and the Swiss have set up their barriers, the flow of hot money to London-where interest rates are appreciably higher than in the U.S.-has

intensified.

A large part of the money going to London is invested directly in Treasury bills. This does nothing really to weaken the Bank of England's squeeze on the liquid reserves of British banks, but the British feel that the flow of hot money obscures seasonal purchases of dollar commodities and is disguising their balance of payments deficit. U.S. companies stop taking advantage of the spread in rates, they fear, things will look worse by comparison.

• Long-Range Worry—The bulk of

the money going abroad seems to be merely seeking higher yields, which might be expected to return once the differentials in yields disappear. But there could be trouble if short-term investing abroad becomes the fashion among a wider segment of U.S. in-

vestors.

A long-term trend could mean much larger swings in the U.S. balance of payments in response to changing conditions in the international money markets. Even without the outflow of short-term funds, the U.S. balance of payments will show a deficit of between \$2-billion and \$2.5-billion this year. This could put more pressure on the Fed to tailor its monetary policy to the balance of payments, rather than to domestic trends.

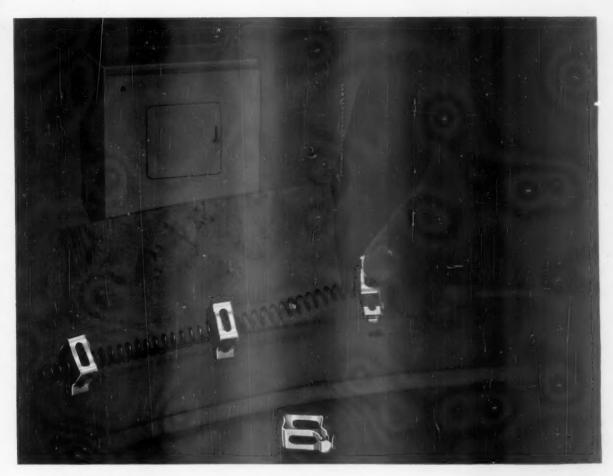
One official put it this way: "This hot money is like the bilge in a boat. It sloshes back and forth without hurting anyone much as long as there isn't too much of it. But beyond a certain point it greatly increases the instability

of the boat."

Some British observers believe that a delicate situation could exist later in the year, when their gold reserves might be falling but would still be swollen by hot money. They contend that any move then by the Bank of England toward easier credit might cause loss of confidence in the pound. (Sterling has been exceptionally strong of late, with the Bank of England practically the only seller.) So they are plumping for an early reduction of the present 6% bank rate.

However, the consensus is that the British won't lower the bank rate until domestic conditions alone persuade them that a cut is necessary to stimu-

late the economy. END



Engineered by Tinnerman . . .

SPEED CLIPS® reduce costs, simplify assembly and servicing on Maytag "Halo of Heat" Dryer

Clothes are dried efficiently in the famous Maytag "Halo of Heat" automatic dryer. And now the quality of the "Halo of Heat" dryer is even better than ever because its unique circular heating element is fastened quickly, securely by 22 special Tinnerman Speed Clips developed by joint efforts of Tinnerman and Maytag designers.

Each one-piece Speed Clip eliminates a separate welding operation on the "Halo of Heat" assembly. Various screw-driving operations formerly required on Maytag's assembly line to capture the ceramic insulator and secure the mounting clamp were also eliminated, with equally interesting reductions in cost. Now, the stainless steel, vibration-proof fastener is snapped in place with simple "button-hook" action. No special skills or equipment are required. Assembly and parts costs have been reduced...substantially! Serviceability in the field has been improved.

A free Tinnerman Fastening Analysis of your own product can show you where similar assembly and cost-saving advantages are possible. Call your Tinnerman representative—he's listed in the Yellov Pages under "Fasteners". Or write to:

TINNERMAN PRODUCTS, INC. Dept. 12 · P. O. Box 6688 · Cleveland 1, Ohio





New switch: Sylvania insures

with a free lighting policy you can enjoy, too!

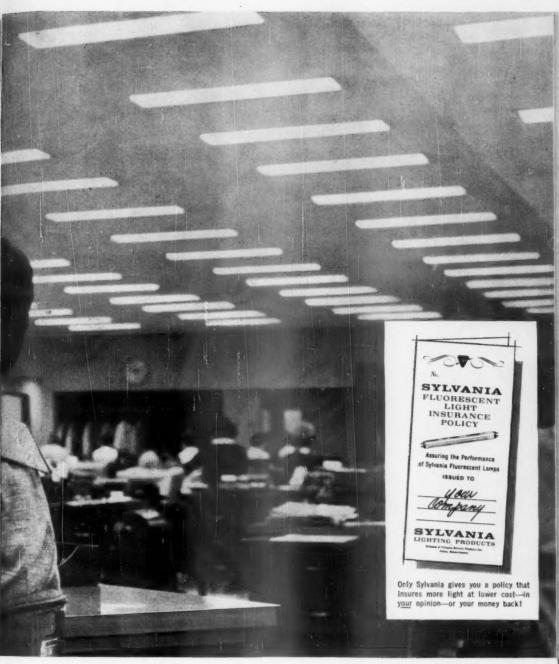
Mutual of Omaha, world's largest exclusive health and accident insurance company, knows its business. And it knows the importance of business costs, too. That's why it insists on the lowest possible TCL—Total Cost of Lighting—and insurance to cover it.

Lowest TCL-(cost of lamp plus power plus maintenance)-

is what Sylvania lamps give you every time. And we back it up with a policy guaranteeing that Sylvania fluorescents give you more light at lower cost than other brands, in your opinion—or your money back. With such a guarantee, the purchase of premium-priced lamps is unnecessary.

Only Sylvania offers this insurance. Mutual of Omaha has it. Do you?

Sylvania Lighting Products, A Division of Sylvania Electric Products Inc., Dept. 57, 60 Boston Street, Salem, Mass. In Canada, Sylvania Electric (Canada) Ltd., P.O. Box 2190. Station "O," Montreal 9.



Mutual of Omaha...

SYLVANIA

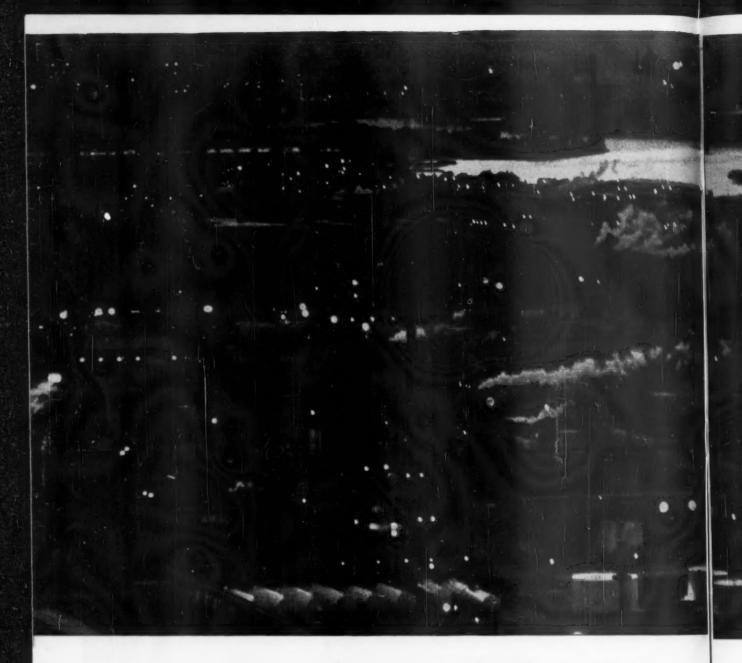
Subsidiary of GENERAL TELEPHONE & ELECTRONICS





Sylvania leads in lighting advances: mercury lamps, fluorescent, incandescent and new light sources for tomorrow,





Petrochemicals Face New



A Business Week Special Report

Their lights twinkling in the night, petrochemical plants along the Houston Ship Channel symbolize an industry that annually feeds more than \$3-billion worth of vital products to the world—but that now has to live with slower growth and a burst of competition from the powerful oil industry.



Challenges

THE petrochemical industry, only a few years ago one of the fastest growing businesses in the nation's history, is bracing itself for a siege.

It is already beset by troubles. Profit margins are shrinking. There is over-capacity in a number of basic products. Wages, taxes, and raw material costs are spiraling.

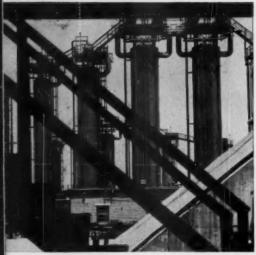
Now the industry faces what could be the worst threat of all—a mass invasion of its markets by the rich and powerful oil industry. The petrochemical business basically consists of the upgrading of hydrocarbons from petroleum and natural gas into a variety of increasingly important chemicals. The oil industry was in petrochemical production at an early date. But the chemical companies have been responsible for most of the industry's growth. Their position is now being energetically challenged.

 Coming of Change—Regardless of how far the oil industry carries its invasion, there's little doubt that the petrochemical industry will continue to grow. Everything points to the impending start of a new cycle of petrochemical expansion. World demand for petrochemical products is gradually increasing.

But it's equally true that the industry's face will change as the oil companies penetrate deeper into petrochemical production. The changes will have a significant impact elsewhere in U.S. business, too. This is especially true because the petrochemical industry is so closely tied to a number of other industries.

Difficult Entry—Executives of petrochemical companies are far from agreement on how to meet the threat from the oil industry. Some few believe there is no reason to worry at all. Others maintain that the rapidly shrinking profit margins in petrochemical production will certainly cause oil company executives to pull up before spending much more on expansion into chemicals.

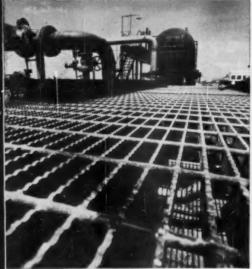
In this school of thought, there's an-



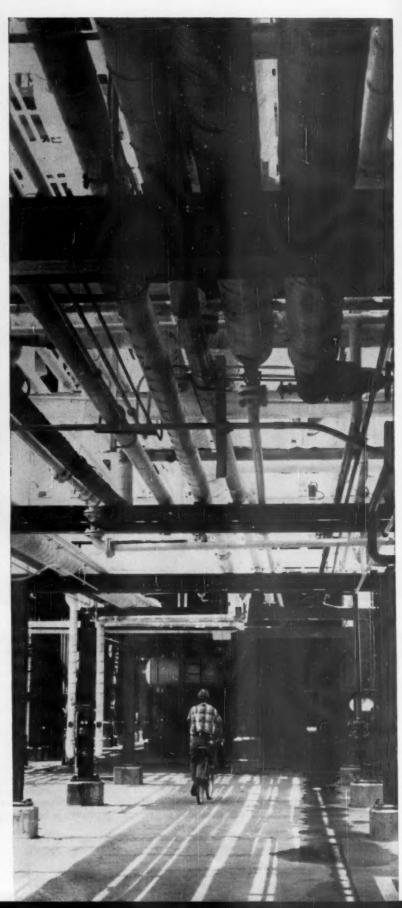
Towers at Dow's ethylene unit.



Surge pipes for gas at Carbide.

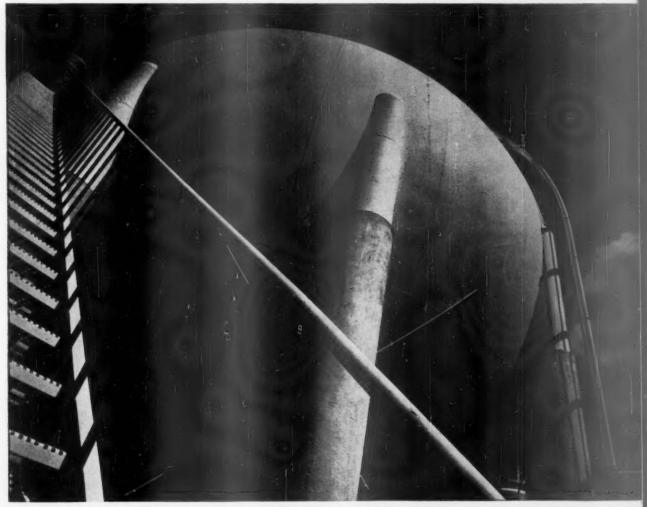


Loading dock for plant's output.



Petrochemicals Gurgle Through Maze of Pipes

Production of petrochemicals in the U.S. is centered in elaborate complexes of facilities that suggest a plumber's nightmare. Plants cheek by jowl in areas such as the Houston Ship Channel sprout a crazy profusion of pipes, fractionating towers, compressors, furnaces, and tanks. Out of the apparent confusion flow materials for plastics, agriculture, paints, synthetic fibers, explosives, dyes, drugs, and a myriad of other industries.



High-pressure storage tank for propane and butane at Petro-Tex facility.

other sound business reason for oil companies to curb their enthusiasm for petrochemicals: to avoid further alienation of the established petrochemical companies, which have been their good customers for years. For this reason, some think oilmen will decide to be

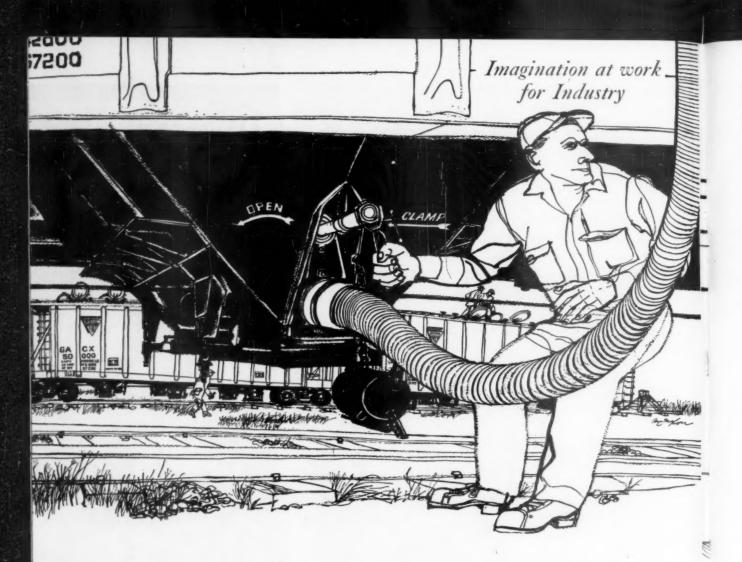
Pipelines (left) carry raw materials and finished products.

satisfied with operating on the fringe of petrochemical production—picking up high-tonnage, low-profit business the chemical companies don't want, for one reason or another.

• Added Hurdles—There are other obstacles to the newcomer in petrochemicals. The decision to get into the business commits a company to a huge capital investment before any sales profit

can be realized. An extremely complicated technology can be involved in upgrading the hydrocarbon molecule. This means the neophyte needs a major research and development program.

Moreover, competition inside the industry is fierce. Even for firmly entrenched companies, it becomes vastly more difficult each year to find profitable new products or to gain an edge on



General American's Dry-Flo® car keeps bulk shipments pure while it keeps costs down

Bulk shipping is economical. Purity is equally important when you're shipping dry foodstuffs, brewers' ingredients, chemicals, minerals or feeds. That's why the General American Dry-Flo car is such a favorite. It keeps bulk shipments clean.

This unique covered hopper car is easy to load and unload (either pneumatically, or by gravity.) Once the car is loaded and hatches sealed, no outside air can enter. Result . . . the Dry-Flo car keeps bulk shipments pure while it keeps costs down.

The Dry-Flo gives you all these advantages . . . yet

is competitively priced with other covered hopper cars.

You may not buy covered hopper cars—but we think you'd 'buy' the kind of thinking that produced them. Whether your problems relate to transportation or storage, to mixing, drying or conveying... to nickel coating, fastening or plastics molding—General American's broad experience and directed imagination can help you.

Whatever you mine or manufacture, process or ship, let us show you why it pays to plan with General American.

GENERAL AMERICAN TRANSPORTATION CORPORATION



competitors by improving processing methods.

• Unconvincing Argument—However, none of these very real problems seems to be discouraging oil companies from pushing further into petrochemical production.

100

Just as the petrochemical industry today is suffering many complaints associated with its new-found maturity, the oil industry is also struggling with a number of seemingly insoluble woes. Oil profits are skimpier and harder to get today than ever before. These days, a rancher cannot be assured of a new Cadillac simply because he finds oil on his land. The serious oversupply of crude oil in the U.S. keeps the production valves closed for all but eight days a month in Texas. The price structure of crude is shaking. The independent refiner is suffering especially, but in even the largest and most efficient companies, the profit margin on crude oil production, refining, and marketing is slim.

This situation has convinced most oil companies that they must seek new and more stable sources of revenue. They have widespread interest in investing in more petrochemical production facilities.

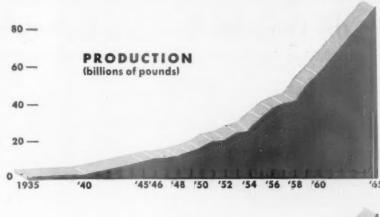
• Profitable 5%—There was a time when a big refinery was more than happy to sell its offgases—LPG gases produced in the refining process—to chemical companies for upgrading into petrochemicals. These abundant gases, such as butane, propane, and ethane, were the basic building blocks of the petrochemical industry, but they meant little to the oil industry. They amounted to only about 5% of what could be extracted from each barrel of crude.

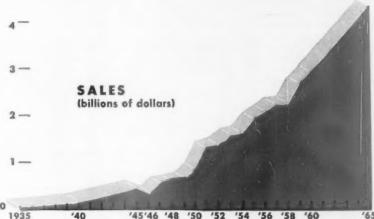
Today, however, upgrading that 5%—and selling it for the relatively higher prices commanded by petrochemicals—can spell to some oil companies the difference between just skinning by and operating at a comfortable profit.

• Up the Line—Humble Oil & Refining Co., a subsidiary of Jersey Standard, is blunt about the reasoning behind its most recent move into petrochemicals—a \$30-million investment in a polypropylene (plastic) plant at Baytown, Tex. (BW—May21'60,p109). "We simply decided," says one company spokesman, "that there wasn't any money in just selling petrochemical building blocks any longer. So we decided to move up the line a little . . . and convert some of our own stock into higher selling materials."

William Keeler, executive vice-president of Phillips Petroleum Co., states the argument for an oil company's move into petrochemicals even more specifically. Says Keeler: "Crude liquid hydrocarbons [oil or natural gas] are generally priced in the vicinity of 1¢ per lb. By conversion to gasoline or some other fuel, the oil company is able to add a







Data: Union Carbide Chemicals, Market Research Dept. Est., BUSINESS WEEK Forecast

Causiness week

penny to their original value. But by conversion to a petrochemical, it can boost the sales price per lb. of the original hydrocarbon stock material an average of 10¢ to 15¢. Conversion of natural gas into ethylene and then into polyethylene represents a 28-fold upgrading of the raw material stock."

Profits for Few—These factors make increased petrochemical production a natural for oil companies. Many chemical company executives even admit that, were they faced with the problems of oil producers today, they would probably be considering similar measures. But they are united in their conviction that only the wealthiest oil companies, willing to spend vast quantities of money and effort in perfecting petrochemical technology, will make much immediate profit out of their ventures.

What it may come down to eventually, according to E. E. Fogle, president of Union Carbide Chemicals Co., a division of Union Carbide Corp., is how long the rank and file of the oil industry can afford to compete with the chemical companies.

Of course, some oil companies, such as Shell and Standard of California, have been in petrochemicals for many years. Their stake, built on a firm technological base, will surely continue to grow. For others, just now venturing into advanced petrochemical production, bitter disillusionment could be ahead.

• Slight Relief—There may be some temporary palliatives for the situation such as mergers or acquisitions, or even the declaration of an armed truce with the chemical industry and the setting up of joint petrochemical-producing companies. But the staunchest supporter of either side has to admit that eventually something will have to give. The U.S. market cannot hope to absorb all the products with which it will be flooded if the oil industry gets into petrochemical production much further.

Already the first signs of the flood have started to appear. Many petrochemical markets are already saturated. There is severe overcapacity in a number of key production items. Prices are dropping. A number of companies, looking for more inviting climes, are channeling expansion money overseas.

Against a backdrop of the U.S. highlight the chief factors in the petrochemical industry today-how it gle of giants that may lie ahead.

operates and how it fits into industry as a whole—this report will attempt to highlight the chief factors in the struggle of giants that may lie ahead.

I. Why Petrochemicals Are Appealing

What is the shape of the petrochemical industry today? Which are the companies now threatened by oil company competition? And just what is a petrochemical?

An etymologist—and many a petrochemical executive—might argue that the word "petrochemical" describes nothing—least of all an industry or a class of product. For petrochemical literally means "rock alchemy."

Generally speaking, however, the word is understood to describe a chemical material made from hydrocarbon raw materials, derived wholly or very largely from petroleum or natural gas sources. Petrochemicals include all the so-called aliphatic, aromatic, and naphthenic organic chemicals as well as all their numerous derivatives. A few inorganic materials—such as ammonia and carbon black—also are generally included under the petrochemical banner, because they're obtained during the process of upgrading the hydrocarbon molecule.

· A Sizable Family-Production-line petrochemicals include everything from building block materials, such as acetylene, ethylene, propylene, butylene, and butadiene, to intermediate materialsalcohols, acetaldehydes, glycols, and certain chlorine derivatives. (A family tree of some chief petrochemicals appears on page 69.) End products out of the petrochemical test tube flow into almost every other industry-from rubber and plastics to drugs and foodstuffs (table, page 58). Recently, the market for petrochemicals has been broadening dramatically, as shown by the increases in miscellaneous uses in the end products table.

More than 3,000 different petrochemical production items are listed in the most recent Dept. of Commerce surveys. By volume, they constitute only 30% of all chemicals produced annually in the U.S. But in value, they represent more than 57% of the \$6-billion total U.S. chemical sales volume. Fifty of the 3,000 petrochemicals now being produced are considered big-tonnage items. The rest sell in quantities ranging down to a few pounds annually. The industry's annual total output is now 50-billion lb.

• Shooting Up—Its growth rate—especially since the end of World War II—has been fantastic. Since 1948, U.S. petrochemical producers have invested an impressive \$7-billion in production facilities in this country alone. This compares to something short of \$2-bil-

lion invested in all the prewar years. Capacity for turning out the petro-

chemical building blocks has been growing at close to 20% annually in the U.S. since 1948; intermediate petrochemical capacity has been trailing close behind, at a 14% annual growth clip. The roster of leading U.S. petrochemical producers (table, page 63) today reads like a blue book of U.S. industry. Industrial giants such as du Pont and Union Carbide now derive approximately half their annual income from sales of petrochemical-derived products. And the list of top petrochemical producers also includes names like American Cvanamid, Olin Mathieson, Spencer Chemical, and Hercules Powder. Four oil companies are included in the list of top volume producers: Standard Oil Co. (N. J.), Shell Oil Co., Standard Oil Co. of California, and Phillips Petroleum Co.

A Child of the 1920s

Historically, the start of the U.S. petrochemical industry is generally placed in 1920—when Standard of New Jersey first produced commercial quantities of isopropyl alcohol. Union Carbide, another petrochemical pioneer, was not far behind with the commercial production of ethylene and ethylene derivatives.

But it was not until the late 1920s and early 1930s that the industry really began to take form. In 1928, Cities Service started marketing methanol and formaldehyde, made from natural gas. Shell Chemical, in the early 1930s, added ammonia (from natural gas), butyl alcohol, methyl ethyl ketone, and then a variety of other acetone derivatives. About the same time, Dow Chemical began work on a commercial method of producing butadiene from hydrocarbon raw materials.

• Wartime Boost—But when World War II broke out in 1941, the U.S. petrochemical industry was not a particularly robust baby. Only four major petrochemical plants, for example, were located in the Texas-Gulf area: Shell's at Pasadena, Tex.; Carbide's at Texas City, Tex.; Dow's at Freeport, Tex., and Jersey Standard's at Baton Rouge, La

However, war soon brought the industry an unexpected shot in the arm.

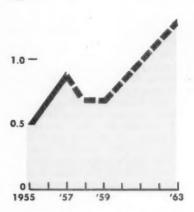
The government had an imperative need for synthetic rubber. So, between 1940 and 1950, it spent \$900-million to build 30 major synthetic rubber, butadiene, and styrene plants along the "Golden Crescent"—a strip of Gulf of Mexico coast running 700 miles from New Orleans to Brownsville, Tex., and inland approximately 100 miles. Today, this area contains more than 80% of all U.S. petrochemical-producing capacity. In less than two decades, it has become the largest concentration of petrochemical productivity in the world, outstripping the prewar petrochemical centers of Europe.

• Numerous Neighbors—In the petrochemical business, it is advisable for economic and technical reasons to build a number of plants in close juxtaposition. As a result, eight major clusters of petrochemical facilities can today be identified on the Golden Crescent. The biggest complexes—at Houston and Beaumont—each pour out hundreds of products and alone account for more than 30% of total U.S. petrochemical capacity.

CAPITAL SPENDING IN PETROCHEMICALS

(billions of dollars)

1.5



Data: M. W. Kellogg Co.

@BUSINESS WEEK

Obviously, the Golden Crescent has compelling attractions for the petrochemical industry:

• Up to 75% of all claimed petroleum reserves in the U.S. lie within easy pipeline reach of the area.

• Water transportation is immediately available to ship products to lucrative markets in the eastern U.S. or abroad or, by Intercoastal Canal, up the Mississippi to Chicago and the Midwest

 The flat Texas-Louisiana terrain is ideally suited for the construction of underground pipelines, necessary to move petrochemical raw materials and intermediates easily from plant to plant.

 Fresh water and salt domes are immediately available.

If the Gulf Coast petrochemical industry had not been able to ship its products and interchange its materials



Now . . . wherever strapping materials are used — selected local distributors offer new AVISTRAP cord strapping for a full range of packaging needs.



New tool and accessory service—Tools, seals and accessories available for immediate delivery from distributors' stocks. Repair service free on all tools.



In-plant technical service by experts—a highly-trained staff assists users in getting every benefit, every saving possible with AVISTRAP cord strapping.



Fast, dependable deliveries - an extensive distributor network, local inventories, assure dependable service for AVISTRAP users throughout the U.S.

Made from high-tenacity Avisco® rayon, AVISTRAP cord strapping out-performs metal strapping and reinforced tapes—at lower cost—in many applications. AVISTRAP is easy to handle; all coils weigh 21 lbs. Yardage equals

coil of comparable width steel strapping. And AVISTRAP has no sharp edges, does not lash out if broken. Call the AVISTRAP distributor nearest you for a demonstration in your plant.

	ALABAMA
Birmingham Mobile	Dillard Paper Co Paper Products Co.
	CALIFORNIA
	Blake, Moffitt & Towne
	COLORADO
Denver	Dixon & Co.
	ONNECTICUT
New Haven	Chatfield Paper Co.
	GEORGIA
Atlanta Augusta Macon	Dillard Paper Co. Dillard Paper Co.
	IDAHO
Boise	Dixon & Co.
	ILLINOIS
Chicago Chicago	Chicago Paper Co. Joseph Weil & Sons, Inc.
Indianapolis	INDIANA Capital Paper Co.
	KENTUCKY
Louisville . Pr	resque Isle Paper Prods., Inc.
Monroe New Orleans.	LOUISIANA Bancroft Paper Co. Columbia Paper Co.

MARYLAND
Baltimore Fiber Products Co.
MASSACHUSETTS
Brockton. J. C. Campbell Paper Co. Cambridge Stone and Forsyth Co. Gardner Symons Paper Co. West Springfield Carter Paper Co. Worcester J. C. Campbell Paper Co.
MICHIGAN
Detroit Beecher, Peck & Lewis Detroit Union Paper & Tinne Co. Flint Beecher, Peck & Lewis Muskegon Steindler Paper Co.
MINNESOTA
Minneapolis Martin Falk Paper Co. St. Paul Anchor Paper Co.
MISSOURI
St. Louis . Rosenthal Paper Prods. Co.
MONTANA
Billings Dixon & Co.
NEW HAMPSHIRE
ManchesterJ. C. Campbell Paper Co.
NEW JERSEY
Newark
NEW YORK
Brooklyn S. Posner & Sons, Inc. Buffalo Hubbs and Howe Co. Long Island City Herbert A. Post, Inc.

ACABAMA	Minister College	HOICH CAROLINA
Birmingham Dillard Paper Co.	Baltimore Fiber Products Co.	Charlotte Dillard Paper Co.
Mobile Paper Products Co.	MASSACHUSETTS	Charlotte
CALIFORNIA	Brockton J. C. Campbell Paper Co.	Greensboro Dillard Paper Co.
Los Angeles Blake, Moffitt & Towne	Cambridge Stone and Forsyth Co.	Raleigh Dillard Paper Co.
San Francisco Blake, Moffitt & Towne	Gardner Symons Paper Co.	Wilmington Dillard Paper Co.
COLORADO	West Springfield Carter Paper Co.	Winston-Salem Dillard Paper Co.
Denver Dixon & Co.	Worcester J. C. Campbell Paper Co.	OHIO
	MICHIGAN	Cincinnati
CONNECTICUT	Detroit Beecher, Peck & Lewis	Cincinnati
New Haven Chatfield Paper Co.	Detroit Union Paper & Twine Co.	Cleveland Gascon Paper Co.
GEORGIA	Flint Beecher, Peck & Lewis	Cleveland Union Paper & Twine Co.
Atlanta Dillard Paper Co.	Muskegon Steindler Paper Co.	ColumbusScioto Paper Co.
Augusta Dillard Paper Co.	MINNESOTA	ColumbusStandard Paper Co.
Macon Dillard Paper Co.	Minneapolis Martin Falk Paper Co.	
IDAHO	St. Paul Anchor Paper Co.	OREGON
Boise Dixon & Co.	MISSOURI	Portland Blake, Moffitt & Towns
ILLINOIS	St. Louis Rosenthal Paper Prods. Co.	PENNSYLVANIA
	MONTANA	Erie Hubbs and Howe
Chicago Chicago Paper Co.	Billings Dixon & Co.	Phila Whitemarsh Paper & Spec. Co.
Chicago Joseph Weil & Sons, Inc.	NEW HAMPSHIRE	Pittsburgh Chatfield & Woods Co.
INDIANA	ManchesterJ. C. Campbell Paper Co.	Scranton Megargee Brothers, Inc.
Indianapolis Capital Paper Co.		
KENTUCKY	Newark	RHODE ISLAND
Louisville . Presque Isle Paper Prods., Inc.	NEW YORK	Pawtucket J. C. Campbell Paper Co.
	NEW YORK	SOUTH CAROLINA
LOUISIANA	Brooklyn S. Posner & Sons, Inc.	
Monroe Bancroft Paper Co. New Orleans Columbia Paper Co.	Buffalo	Columbia Palmetto Paper Co. Greenville Dillard Paper Co.
New Orleans Columbia Paper Co.	Long Island City. Herbert A. Post, Inc.	Greenville
AMERICAN VISCOSE CORPORATION	INDUSTRIAL PACKAGING DEPT	1617 PENNA. BLVD., PHILA. 3, PA.
MILLIONIN TIGOGGE CONFORMITON	, INDUSTRIAL TAURAGING DELT.	, LUIT I CHIMA DEFO., THIER. O, TA.

NORTH CAROLINA

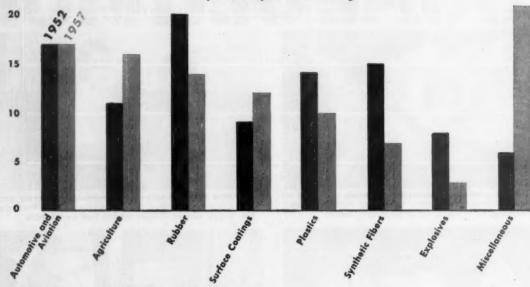
TENNESSEE
Knoxville Dillard Paper Co. Memphis Mayer Myers Paper Co. Nashville Clements Paper Co.
TEXAS
El Paso Dixon & Co.
UTAH
Salt Lake City Dixon & Co.
VIRGINIA
Bristol Dillard Paper Co. Roanoke Dillard Paper Co.
WASHINGTON
Seattle Blake, Moffitt & Towns
WISCONSIN
Milwaukee John Rauschenberger Co.



*Trademark American Viscose Corporation • Patents pending.

PETROCHEMICAL END-USES

(percent of production tonnage)



Data: Union Carbide Chemicals, Market Research Department Estimates

@BUSINESS WEEK

so conveniently, it's entirely possible that it would have developed far more slowly.

Of course, since the oil industry is also centered around the Gulf Coast, many of the same advantages will apply to it as it moves deeper into petrochemicals. Oilmen are aware of this, and it is among the factors drawing them toward the petrochemical business.

A Company Case Study

A classic example of how the petrochemical industry grew is offered by the Monsanto Chemical Co. Aided in part by the government's interest in petrochemical production during World War II, Monsanto, like many other chemical companies, found itself inevitably drawn more and more into the burgeoning new field.

Monsanto won its first toehold in Gulf Coast petrochemicals in 1941, when it purchased a 30-acre tract in Texas City, along the Houston Ship Channel. On this land, Monsanto was to build and run for the government a 20,000-ton-a-year styrene plant—badly needed in the synthetic rubber program.

• Buying Uncle Sam Out—At the end of the war, Monsanto, along with others in the area, found itself with too much styrene capacity for peacetime synthetic rubber demand. So, in mid-1946, it got permission from the government outilize some of its styrene capacity to make products for the rapidly growing plastics industry. A few months

later, when the government put its synthetic rubber-making operation up for sale, Monsanto purchased for some \$10-million the plant it had been operating and jumped into the petrochemical business in earnest.

Monsanto's plunge at Texas City received a setback in 1947, when its plant facilities were all but destroyed by a disastrous explosion that also leveled much of the community. But the company had had a taste of petrochemicals and found the business to its liking. Texas City was rebuilt. Besides a styrene plant, Monsanto put in ethylene-producing facilities. Then came more styrene and units to make vinyl chloride and acrylonitrile. As the years rolled by, the company added facilities for high-purity ethylene, methanol, and polyethylene. A tight little complex of facilities was in operation.

• The Complex Grows—At the same time, a number of other chemical companies had also bought former government styrene rubber facilities as the basis for petrochemical production. In Texas City, along with Monsanto, Union Carbide was starting to build a petrochemical complex. In Freeport, Tex., Dow was at work on the beginnings of a giant \$700-million petrochemical complex. In the Beaumont-Port Arthur-Orange area of Texas, other companies were adding new petrochemical plants almost as fast as they could lay their hands on structural steel and cement.

None of the big new petrochemical complexes was more than 150 miles

from any other, and many of them produced and sold items needed by others. So it was quickest and simplest to pipe in raw materials from the oil and gas fields to the petrochemical plants—and also to relay some key building block chemicals from plant to plant by pipeline as well.

· 'Spaghetti Bowl'-Today, the petrochemical companies in the Houston-Beaumont areas are virtually locked together by a maze of underground pipelines (map, pages 66 and 67), commonly known as the "Spaghetti Bowl." The key material in the network is ethylene, of which the major supplier is Gulf Oil Co. Gulf pumps about 400million lb. of it into the Spaghetti Bowl complex every year. But there are also hundreds of miles of other pipelines connecting the plants and carrying not only brine, natural gas, and crude oil, but also such things as acetylene, hydrogen chloride, sodium hydroxide, and

methyl isobutyl carbinol.

Not all the U.S. petrochemical complexes are confined to the Gulf Coast, of course. There are several big concentrations of facilities elsewhere (map, page 64). Generally, however, these facilities are self-contained, with little interchange of products between them. Each company, such as Phillips at its Borger (Tex.) plant, or Cosden Petroleum Corp. at Big Spring, Tex., is inclined to upgrade its own products rather than funnel them to someone across the fence for final processing.

• Inland Sites-These inland petrochemical complexes are sometimes used



BOOKBINDER

PAPER DOES SO MUCH FOR PEOPLE (and Champion people do so much for paper)

In suburb or city, for business or pleasure, people rely on the mail. Fact is, people count on envelopes for all sorts of important jobs—like delivering an insurance policy, sending news from home, announcing a new arrival. Just as people depend on paper, paper depends on people—their skills and abilities, their singleness of purpose—to make and deliver the best. At Champion, our people are one of our biggest assets. Another good reason why Champion Sets the Pace in Papermaking.



THE CHAMPION PAPER AND FIBRE COMPANY GENERAL OFFICE: HAMILTON, OHIO . SALES OFFICES AND DISTRIBUTORS IN MAJOR CITIES,



IF YOU BUILD HOMES OR PRODUCTS FOR THEM

B.F. Goodrich has a foot in y

MAYBE YOU'VE SEEN a thousand homes being built—or maybe just watched your own—but we'll bet you've never seen anything quite like this house. There really are too many things going on at once!

We created this picture to show you how B.F.Goodrich helps build better homes. For each of the products shown assists contractors in building houses a little faster, better, and at lower cost.

For example, these storm doors are made of BFG rigid vinyl—they'll never warp, never need painting. When it comes to painting—even the siding is different. It's aluminum, coated with enamel based on BFG vinyl. The manufacturer warrants the finish against blistering, cracking or crazing for ten years.

Even the pipe that brings gas to this house is different. Extruded from BFG vinyl, it will never corrode. Years from now it will provide just as efficient delivery of gas as right after installation.

These are just a few of the ways that B.F.Goodrich helps improve existing products or develop new ones. For more examples see the list at the right.

B.F.Goodrich serves business in many other fields, too—from agriculture to aviation, from mining to missiles—with raw materials and ideas on how to use them . . . with finished products that cut costs and solve tough problems. If you'd like more information on these products—or how BFG can help you with your problems—write President's Office, The B.F.Goodrich Company, Akron 18, O.



PRODUCTS IN THIS PICTURE MADE WITH VINYL MATERIALS FROM BFG

your door

ON THE WALL, richly textured BFG vinyl stays new-looking, good-looking for years. Goes on like wallpaper. Won't scuff or stain, wipes clean with soap and water. Stands plenty of wear and tear, eliminates need of frequent painting.





VINYL FLOOR TILE THAT GLOWS IN THE DARK adds safety plus beauty to the home. New "After-Glow" phosphorescent tile, developed by B.F.Goodrich, continues to glow when the lights are out, illuminates dark stairways, halls, other danger spots.

1 & 2. FLOOR TILE and GARDEN HOSE by The B.F. Goodrich Company; 3. STORM DOORS AND WINDOWS by Falako Corp., Akron, Ohio and Bayvo Products Co., West Collingswood Hts., N. J.; 4. JALOUSIE WINDOW FRAMES by Woodlin Metal Products Company, Texarkana, Texas; 5. GAS PIPE by Kraloy Plastic Pipe Company, Inc., Santa Ana, Calif.; 6. ALUMINUM SIDING, coated with enamel based on BFG vinyl, by Hastings Aluminum Products, Inc., Hastings, Mich.; 7. WIRING insulated with BFG vinyl by Anaconda Wire & Cable Company, New York; 8. ELECTROSTRIP by Bulldog Electric, Detroit, Mich.; 9. SCREENCLOTH of vinyl-coated Fiberglas by Owens-Corning Fiberglas Corporation, Toledo, Ohio: 10. AWNINGS made by NAVACO, INC., Dallas, Texas; 11. TARPAULIN, vinyl-coated, by Weblon, Inc., New York.

Other BFG products shown are: 12. CELLULAR RUBBER insulation; 13. TIRES on truck and wheelbarrow; and 14. FOOTWEAR, to keep workers' feet safe, warm, dry.







Snown here; our \$1204 executive posture chair. Fully adjustable for custom-fit comfort. Wide trim-line base for stability

JUGGLE OFFICE SPACE WITH ROYAL

Only Royal gives you such quality, such flexibility, such comfort! The unique Royal concept of modular office furnishings gives you unusual flexibility in arranging your office space. Comfortable chairs by Royal, versatile Arnot Partitionettes* and Modular Desk Components—all combine to provide the most efficient use of your present office space. Easily installed—just as easy to rearrange. Write for brochure that pictures all the styles, all the sizes and colors. Just send a card or letter to ROYAL METAL MANUFACTURING COMPANY, Dept. 3-I, One Park Avenue, New York 16, N. Y. In Canada—Galt, Ontario.

SHOWROOMS: New York, Chicago, Los Angeles, San Francisco, Seattle, Galt, Ontario LICENSEES: France, England, Australia, Venezuela • FACTORIES: Plainfield, Conn., Michigan City, Ind., Los Angeles, Cal., Warren, Pa., Jamestown, N. Y., Galt and Smiths Falls, Ontario



T.M. REG. U.S. PAT. OFF.

by oil companies as proof that it should be possible to build up such a complex almost anywhere-if raw material availability and cost can offset the transportation advantages along the Gulf. As the railroads become more competitive and negotiate rates, inland plant facilities grow even more attractive.

A dramatic example is Cosden's Big Spring operation. In the fiscal year ended last April, Cosden realized 18% of its gross profit from the production and sale of petrochemicals. Cosden makes polybutene, styrene, polystyrene, and molding resins, as well as benzene, toluene, orthoxylene, and para-xylene, Yet it took only 3.7% (by volume) of Cosden's refinery output to supply the feed stock for this 18% chunk of total company profits, according to Dan Krausse, senior vice-president.

Cosden's figures provide a strong argument for other oil companies thinking of additional investment in petrochemical facilities. They also apparently were a sales point to W. R. Grace & Co.-which acquired 53% ownership

of Cosden last June.

· No More Complexes?-Some observers, both in and out of the industry, think the last of the big petrochemical complexes may have already been begun. Few good sites remain within easy reach of oil or natural gas, fresh water, salt, cheap transportation, and labor. Besides, it would be years before any new complex would be profitable. Before it began to pay off, hundreds of millions of dollars would have to be poured into literally dozens of new plants. The industry's rule of thumb is that a company must invest at least S1-million for every acre it occupies in the larger complexes or around \$100,-000 per employee.

In this view, the industry's growth, at least during the 1960s, will probably come mainly from the addition of new plants to complexes already in place.

Oil Companies Catch On

Petrochemical processing traditionally has not been the oil companies' first order of business, but there is considerable evidence that they can cope with its complexities when they have to. When du Pont needed a big supply of p-xylene, for example, for the commercial production of Dacron, Standard of California came up with an ingenious method of freezing out highpurity p-xylene from naphtha. The Socal method proved cheaper and much simpler than the conventional technique of preparing p-xylene from coal tar. Today, three-quarters of the Dacron produced in the U.S. is derived from oil feed stocks.

The oil industry also takes credit for developing synthetic glycerine. Late in the 1940s, when detergents were be-

Petrochemical Producers of the United States

COMPANY	1959 SALES	SALES OF PETROCHEMICAL PRODUCTS (1)	PETROCHEMICAL PRODUCTS AS A PERCENT OF TOTAL SALES
-	Millions of	Dollars	
du Pont	\$2,144	\$1,072	50.0%
Union Carbide	1,531	841	54.9
Dow Chemical	705	353	50.0
Monsanto	615	332	54.0
Standard Oil (N. J.)	7,911	256	3.2
Shell Oil	1,810	227 (2)	12.5
Allied Chemical	720	180	25.0
Phillips Petroleum.	1,163	165	14.2
Standard Oil (Cal.)	1,565	143	9.1
Rohm & Haas	216	130	60.0
Olin Mathieson	702	100	14.2
American Cyanamid	584	88	15.0
Spencer Chemical .	57 (3)	57	100.0
Hooker Chemical .	150	15	10.0

(1) BUSINESS WEEK Estimate (2) U.S. sales only (3) 12 months ended 3/31/60

ginning to become popular, a severe shortage of natural glycerine developed. Glycerine had always been a byproduct in soap-making. With less soap being made, there was less natural glycerine for the manufacture of such things as cellophane, explosives, and alkyd resins.

Shell Development scientists at Emeryville, Calif., had anticipated the effect of detergents on the glycerine supply. They had in advanced development a process for making synthetic glycerine from byproduct propylene available from the oil stream. Today, almost half the glycerine made in the U.S. is synthetic. As a result, the price has dropped in the last halfdozen years from 41¢ to 29¢ a lb. · Tempting Markets-The ability of compounds such as these, synthesized out of the oil or natural gas stream, to compete with natural products is another inducement for oil companies to go into petrochemicals. They see, for example, that GR-S rubber (general purpose synthetic rubber) is today selling for 23¢ per lb. Polyisoprene, the new synthetic equivalent of natural rubber (BW-Mav21'60,p78), is listed for sale at 35¢ per lb. Natural rubber, on the other hand, continues to sell for 40¢ to 43¢ per lb. Except for the international repercussions that would result, plus the big investments of major rubber companies in natural rubber plantations, there's little doubt that

most of the rubber currently consumed

in the U.S. could be petrochemically derived.

Benzene, formerly only a byproduct of coal coking for the steel industry, is another petrochemical promising the oil companies immediate profit possi-bilities. Benzene is still scarce in the U.S. as a result of last year's fourmonth steel strike. With new production facilities expected on stream later this year, supplies should be more plentiful. But the oil industry has had a tempting glimpse of the profit potential in petrochemicals of this sort.

Sometimes Strange Bedfellows

The petrochemical industry is tied to the oil and the natural gas industry through their buyer-supplier relationships, of course, but another kind of harmony also draws the industries together. For the most part, petrochemical companies spew forth their products to other industries-not to the public directly-in a pattern not unfamiliar to the oil industry. A few big petrochemical producers-notably Dow, Monsanto, and du Pont-have tried to market their products directly to the general consumer. But, by and large, the petro-chemical processors have always sold their products to other industries or even to petrochemical colleagues.

The result has been some exceedingly close relationships between companies. At the same time, the best customer for one petrochemical may



be its chief competitor in the production of another.

To outsiders, this method of operation often looks quite peculiar. It's no novelty to oil companies, however. Better than perhaps any other major industry in the U.S., oil and gas companies are fully cognizant of the kind of business necessities that encourage the development of a petrochemical complex.

• Customers Change—In recent years, though, the petrochemical companies' customers have gradually been changing places in order of importance (table, page 58). In 1952, for example, the most petrochemicals sold in the U.S. went to the rubber industry; by 1957, top position was held by automotive and aviation producers. Agriculture and surface coatings climbed up the ladder between 1952 and 1957; plastics, synthetic fibers, and explosives lost ground.

All the while, there has been the fiercest competition between producers to develop new markets.

Simultaneously, there has been a continuing contest in the laboratory to synthesize totally new compounds. The major petrochemical companies have, in recent years, steadily reinvested 3% to 5% of every sales dollar in research.

Out of this has come not only a steady flood of products, but also a variety of ways to make certain desired molecules out of the same stock materials. Phenol, for example, can be made in any one of four different ways today; polyethylene can be formed by five different processes; and there are three practical techniques to produce acetone.

 Oilmen Perk Up—The net result of the activity in the labs has been partly to keep up pressure behind the growth of the petrochemical industry. In addition, though, it has been to impress the oil companies that petrochemical research can conceivably pay off in a big way.

More Cash for Chemicals

Jersey Standard, as a result of what it has seen, now budgets 25% of its research effort on petrochemicals, even though petrochemicals still comprise only 4% of the company's total sales volume. This year, approximately 35% of all investments in new manufacturing facilities made by the oil industry will be for building petrochemical-producing units. Jersey Standard, Shell, Phillips, Standard of California, and Gulf have the greatest petrochemical production capacity at the moment. But practically every oil company of any size is now also planning to build petrochemical production units of one sort or another. So Socony Mobil, a company not usually considered a major petrochemical producer, is already building a \$25-million, 380-million-lb. ethylene unit alongside its Beaumont, (Tex.) refinery.

• Differing Roles—Not all oil companies are agreed, of course, as to how far their penetration into petrochemical production should go. At one extreme, Phillips regards its petrochemical business as a firm third leg of its company operations, with producing and refining the other two. At the other, Gulf proclaims itself happy, for the time being at least, in just providing building blocks such as ethylene for petrochemical producers.

Of the oil companies, Shell says it has the widest range of petrochemical products for sale. Texaco is relying on a subsidiary, set up jointly with American Cyanamid Co., to handle its petrochemical activities. Standard of Cal—with two petrochemical-producing subsidiaries, Oronite and Cal-Spray—is deliberately steering away from low-price and toward the higher-price petrochemical production items.

• Recent Outlays—As an index of their ardor for petrochemicals, in just the last 12 months the oil companies have announced new facilities worth almost half a billion dollars to produce petrochemicals for the plastics industry alone. Biggest items on the list:

 Jersey Standard's move into polyolefin production at its Humble (Baytown, Tex.) refineries.

 Shell's diversification of its petrochemical base through lease of an American Cyanamid plant for the production of styrene.

 Standard Oil (Indiana's) move into polystyrene production through its subsidiary, Amoco Chemicals.

• Sun Oil Co.'s decision to cut into the polypropylene market, by means of a 50-50 deal with American Viscose in a new company, AviSun.

• Gulf Oil Co.'s interest in high-density polyethylene production, through Goodrich-Gulf. (Phillips is already producing high-density polyethylene at Pasadena, Tex.)

II. The Problems of Growing Too Fast

The oil companies' aggressive steps toward increased petrochemical production of their own are a source of acute distress to the established industry. Petrochemical producers are already afflicted by a number of problems, and the newcomers are certain to share the woes. Indeed, many of the troubles will be aggravated by the addition of more producers.

Perhaps the most apparent of these problems is overcapacity. Most petrochemical products are already in good supply in the U.S. Any reasonable increases in demand for the older products can be filled simply by expanding plants already in operation. As for

new products, it is becoming increasingly hard to find markets for them.

One cause of the problem is that petrochemical producers deliberately build excess capacity into their new plants. This cushion makes overcapacity that much worse when something else happens—a slump in demand, an increase in productivity, a flood of foreign imports, or completion of new competing capacity.

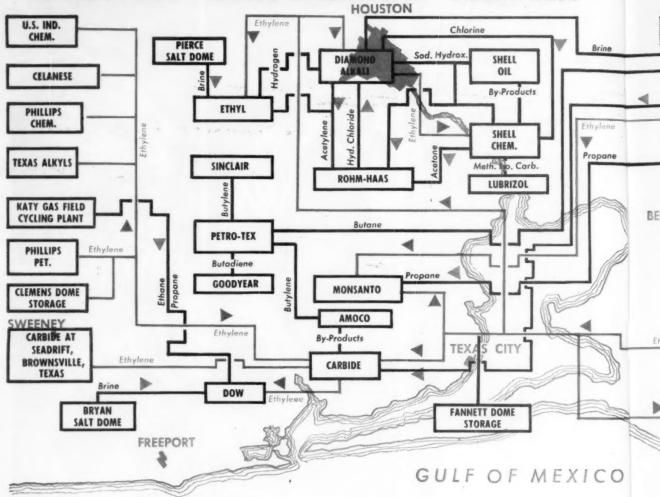
Ammonia, for Instance—Overcapacity
can also be brought on by a geographical
redistribution of production facilities.
 Ammonia plants, for example, are now
being built close to their markets, rather
than in the traditional petrochemical



for product performance... use Fafnir Ball Bearings

You need power in a trench digger ... speed in a pneumatic grinder ... precision in a manipulator. Whatever you need in your product, Fafnir has the diversity (from fraction-of-an-ounce miniature bearings to 60-pound pillow blocks) and the capacity (over 5,000 employees) to supply the ball bearings you want, when you want them. For diversity, for capacity, for the utmost in precision, turn to Fafnir. The Fafnir Bearing Company, New Britain, Conn.

'SPAGHETTI BOWL' PIPELINE NET LINKS HOUSTON PETROCHEMICAL COMPLEX



complexes. The reason is that natural gas, from which ammonia can be extracted, is now available almost everywhere. It has proved cheaper to put the plant near a market than to pay the heavy charges for shipping from older production units. Sound as this may seem economically, the result is that the new and old plants together have far more capacity for producing ammonia than today's market justifies.

Another factor contributing to overcapacity is the slowing of the industry's growth rate; facilities were built to keep up with the speedy pace of a few years ago, but now, with growth slackening, they are proving excessive. Competition isn't helping the capacity situation; knowhow on any one company's specialty has usually been within easy reach of rivals through licensing and exchange of patents. In some areas, the continuing discovery of new products even adds to overcapacity; in plastics, for example, most new materials now are marketed as replacements for older plastics.

Unfortunately, no solution to the overcapacity problem is in sight in the near future.

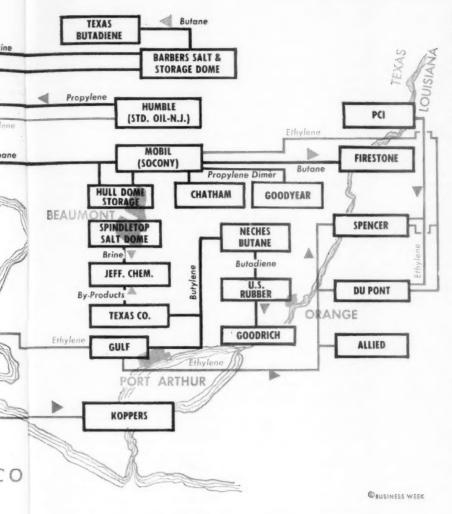
Bigger Plants Than Ever

If a petrochemical producer is to compete successfully, though, he must build a vastly bigger plant these days than ever before. Only with volume production can he bring his costs low enough to sell at the prices prevailing in today's market. The irony, of course, is that a huge new plant turning out petrochemicals in volume only worsens the overcapacity problem.

Be that as it may, a company deciding to enter petrochemicals as a new line of business may have to commit

almost all its annual expansion budget to the project. And it has little room for error. Competition is such that there isn't much chance to reconsider once the project has been launched. A company's choice usually is simple: try to take a fast payout on a new product or risk not getting a payout at all.
Bigger Ethylene Plants—Ethylene provides a vivid example of a bigtonnage petrochemical for which bigger and bigger plants have been built. In 1950, in the youth of the plastics industry, it was feasible for a company to build an ethylene plant with capacity for 50-million lb. per year. Such a plant would be quite likely to return good profit, but the company wouldn't be irrevocably committed, by the sheer size of its facilities, to the plastics industry.

By 1955, though, the economics of producing polyethylene had changed.



To compete in the field, a company had to construct facilities for 100-million to 150-million lb. per year. This volume would reduce unit costs sufficiently for the manufacturer to compete with his rivals in price. Today, it's rare when a new polyethylene plant has less than 200-million lb. of capacity built into it.

Changing Price Structure

As one result of the overcapacity problem, there's a real crisis in the petrochemical price picture, too.

A decade ago, chemical companies had what seemed like a strikingly sound floor under their prices. It was a real seller's market. But the situation has changed drastically. For example, the plastic material polyvinyl chloride sold for about 38¢ per lb. 10 years ago. Today it goes for only 19¢ per lb. The price cuts have affected more than just

the older, more established products, too; there has already been crosion in the price of polypropylene, a much newer material that isn't even in big production vet.

• Lower at the Start—For years, the industry was able to introduce its products at a price that in the first few years would repay the costs of research and development. But only rarely is this possible any more. With each new material, it's necessary to sell at a price that will stimulate top-volume sales, whether or not the price has any relation to development costs. The old way of pricing has become a luxury.

Another force pulling prices down has been the decrease in foreign sales of U.S. petrochemical products. This has increased the supply available for sale at home and thus exerted downward pressure on domestic prices. The industry accounts for the drop in ex-

ports by citing the relatively high cost of U. S. labor, high freight rates, rising protective tariffs in many nations, and the growth of the chemical industry in Europe and Japan.

Petrochemical companies are trying to free themselves from the price-cost squeeze by improving efficiency without adding to labor or raw material costs. But this approach can accomplish only so much.

 More of Everything—Prices are also a problem partly because competition in the industry is so vigorous today. There are more companies than ever making the same products; more products vying for some of the same markets; and even processes competing to make the same products.

In 1949, there were only 12 ammonia producers in the U.S.; today the total is 40. Ethylene fights with acetylene and propylene for the same end uses. And there are at least 10 different processes for producing one item—acetic acid.

In the effort to protect shrinking profit margins, each competitor today is jealously guarding his process secrets if possible. With radically new products harder to come by, production processes are more important than ever.

Labor and Tax Worries

Within the industry, there are two special problems worrying company executives: labor and taxes.

Petrochemical companies feel uneasy about their labor relationships, particularly in the Houston Ship Channel area, where so much of their production is centered. In that area, the major plants are unionized along craft lines, so that each works manager has to deal with a number of small labor groups. If just a single small union fails to settle with management, a complete plant complex can be forced to shut down

This is one reason why the major companies located in the area are, for the most part, adding to their facilities only if they can't afford not to-if, for example, they have to take care of existing raw materials. In other cases, the companies are choosing instead to install new complexes elsewhere. Carbide, for example, is building two new complexes-one at Brownsville, Tex., and another at Seadrift, Tex. Dow is building one in Louisiana. At these sites, either the new plants will not be unionized or will be represented by different locals than the channel units. They will thus provide alternate production facilities in case of labor trouble along the channel.

 Bigger Tax Bite—The possibility of higher taxes on their Texas layouts is also prompting some petrochemical companies to temporarily shelve expan-



Finding the most profitable site for your new plant can be a confusing task, especially when you have to appraise claims and counter claims. To help you make the right selection, the N&W has engaged Fantus Area Research to make a comprehensive evaluation of its 6-state territory . . . most extensive and penetrating study of its kind ever made. Fantus sifts, weighs and interprets the facts-gives an unbiased, scientific analysis that shows positively whether your plant can make more money in N&W territory.

READY SOON — the first detailed Fantus analysis. Watch for announcement. Norfolk and Western Railway, General Offices, Roanoke, Virginia.





sion plans in the state or to look elsewhere for plants. Most petrochemical plant sites are located in small towns for safety reasons, and these towns look to the companies to pick up most of the tab for government. Individual

counties, too, continue to hike tax evaluations of petrochemical properties.

So far, the industry as such is not taxed by any special state levy. But petrochemical sales are almost as high as oil and gas industry sales in Texas. Last year, sales of petrochemicals produced in Texas came close to \$3-billion. The total value of natural gas, crude oil, and casing-head gasoline tapped in Texas came to about \$3.5-billion. It is possible that the state legislature will try for more tax revenue from the petrochemical industry.

III. How to Keep Expanding

Far from sitting back and brooding about their troubles, petrochemical companies are devising ways to insure that the growth of their industry will continue.

One technique has been to seek new markets by building production facilities overseas.

Union Carbide, for instance, is building several ethylene glycol plants in the Common Market countries of Western Europe. Dow is spending \$25-million for expansion overseas this year. Oronite, a Standard of California subsidiary, and Phillips are investing \$15-million each abroad. Monsanto has committed about \$28-million to its foreign expansion in fiscal 1960.

• Competition Abroad—So far, in most cases, the U. S. petrochemical producers have been able to compete successfully on foreign soil. In Germany, for example, the U. S. concerns have done well because the local industry is still learning many of the newer tricks of chemical engineering and because its plants cost more to build. Of course, there's no telling how soon the Germans will catch up.

Fortunately for the U.S. companies, the petrochemical industry in nations such as Britain and Germany is no longer strong enough to control prices and thus keep out competition—the way it did before World War II.

As the U.S. producers move overseas, they sometimes have to change their thinking on matters such as size. In Japan, for instance, it's possible to make money with a plant that would be uneconomically small at home.

Integrating to Spread Risks

Petrochemical companies have also been trying to integrate backward, toward the source of their raw materials—oil and natural gas. Monsanto was one of the first to do so when it bought Lion Oil Co. Dow followed suit in its acquisition of Brazos Oil & Gas Co. and Bay City Refining. Last spring, W. R. Grace picked up more than half of Cosden Oil in a similar move.

Other petrochemical companies, however, frankly fear a heavy investment in basic oil or natural gas facilities, since that industry has troubles of its own. Anyway, backward integration has not so far seemed to lower production costs perceptibly.

• Joint Deals—Instead, many producers have been making joint arrangements with oil companies to strengthen their access to raw materials. For instance:

Atlas Powder Co, has been linking interests with Sohio.

Olin Mathieson and Sun Oil formed Sun Olin to produce urea.

American Viscose and Sun established AviSun to turn out polypropylene.

• Stauffer Chemical and Richfield Oil went into partnership in American Chemical Corp.

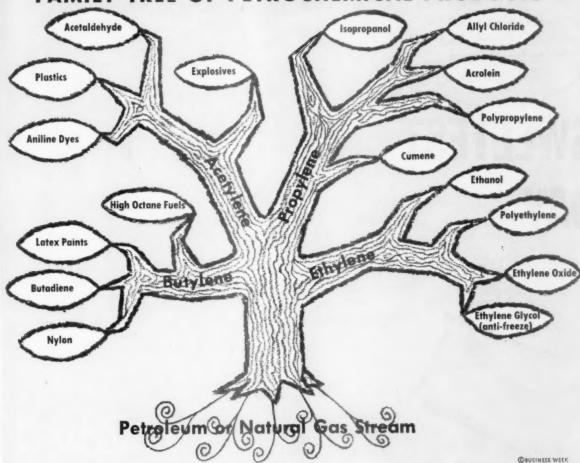
 Rexall Drug & Chemical has a joint venture with El Paso Natural Gas to make polyethylene.

Such teamwork can be profitable indeed. Perhaps the prime examples are Shell Oil and Shell Chemical, which together form the largest chemical-oil combine on the Houston Ship Channel, and Phillips Petroleum and Phillips Chemicals in Borger, Tex. Arrangements of this sort may well grow more common. The joint enterprises emphasize the interdependence that is so characteristic of the industry, at least along the Golden Crescent.

• Outside Partners—Other petrochemical producers are signing up with companies in other industries, such as metals or food, to share the risk of a new petrochemical venture.

Today, a company introducing a new product generally must go whole hog on production, so that it can build a sizable market for itself before competitors start coming on-stream with output of their own. Scaling up fast to tonnage production of a new petrochemical, however, may be a multimillion-dollar mistake, if something goes wrong with the technology. That's why companies want a companion to share the risk—and preferably one with previous experience in the area.

FAMILY TREE OF PETROCHEMICAL PRODUCTS



With an experienced partner at their side, companies such as Quaker Oats, Armour, Morton Salt, National Distillers, and Minnesota Mining & Mfg. Co. have taken their first steps into petrochemicals. These companies haven't penetrated the industry very far yet. But some think the trend will start to snowball before long.

• Take or Pay—During their fast-growth years, most major petrochemical producers were able to reduce their risks on new plants by inducing customers to sign "take-or-pay" contracts. In these deals, a buyer agrees to take all a plant's production of a material—or else pay for what he doesn't take. This guarantees the buyer a source of supply—and also guarantees the producer a market. Such contracts indirectly stimulated the industry's growth.

Now, however, very few such contracts are signed. To be sure, there are certain understandings between producers and customers on sales, but not of the strict variety inked during the seller's market. There's only one big exception: When a new plant is in-

stalled to produce a low-priced basic commodity, a take-or-pay contract is generally still signed.

The inability to insure a big market for any one new product has increased the tendency for producers to invest in a wide variety of items, though. This wider product mix does give companies the advantage of somewhat more stability.

The Importance of Research

The industry's new products and processes trace their origin, of course, to the great sums of money spent each year on research and development (table, page 70). Many industry executives consider R&D outlays the surest protection against more invasion by outsiders.

A continual stream of innovations flows from the petrochemical laboratories. One of the most dramatic recently has been the improvement in the use of catalysts to rearrange hydrocarbon molecules in new and different patterns. Catalytic research has been responsible

for important new end products such as polypropylene, and for many new and cheaper ways to make older intermediate materials.

A notable example of the latter is the direct oxidation process for producing ethylene oxide: Formerly, ethylene oxide was manufactured in a roundabout way, by reacting ethylene chlorohydrin with sodium hydroxide. Before this could be done, ethylene chlorohydrin had to be obtained by the action of a hypochlorite on ethylene. Now, using a catalyst, ethylene oxide can be derived from ethylene directly, without any of the intermediate steps, and at considerably less cost.

• Progress Comes Slower—However, very few recent discoveries have given any one company dominance for long. For one thing, the easiest plums to reach have all been picked off the petrochemical research tree. This factor, coupled with the need for cost-cutting, has shifted the research emphasis toward perfecting production processes. Basic research is still considered important for future growth, but a bigger share

Continental's GAIR division Suggests . . . for better business, tie-in with

SWEETEST DAY

October 15



Do you help cater to the nation's sweet tooth? If you do, you can raise the sales of all your items connected with the candy industry by making the most of Sweetest Day! No matter what you pack—sugar, chocolate, flavoring, fruits and nuts—plan to tie-in with the big candy promotion! For full details, write National Confectioners Assoc., Norma Tait, Public Relations, 36 S. Wabash, Chicago 3, Ill.

And remember, the products you make, process, or pack, can be sold so much better in fine folding cartons by Gair!

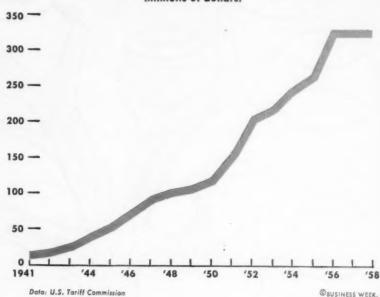


CONTINENTAL CAN COMPANY
BOXBOARD & FOLDING CARTON DIVISION
S30 Fifth Avenue, New York 36, N. Y.

RESEARCH & DEVELOPMENT EXPENDITURES

SYNTHETIC ORGANIC CHEMICALS

(millions of dollars)



of total R&D spending now goes for process development.

In many companies, the philosophy behind process development "is to undercut the Johnny-come-lately," according to A. P. Beutel, vice-president of Dow Chemical. Another motivation is today's intense competition. In hopes of getting the jump on rivals, companies have basic research and process development in progress simultaneously on the same project. Dow, for example, has as many as four teams all working on synthesizing the same molecular configuration at the same time. A few years ago, it would have been

possible to let basic research proceed as far as possible before worrying about processes.

• Future Markets—The industry's present line of products has achieved spectacular acceptance. Petrochemicals go into the paint, plastic, agricultural, and synthetic fiber industries at a rate of more than \$1-billion a year. Sales to the explosives and dve industries exceed \$100-million annually. Drugs, perfumes, cosmetics, adhesives, and many other specialties add to the widening market.

Researchers know this is only the beginning. But from here on out, the going will be rougher.

IV. Petrochemicals With a Future

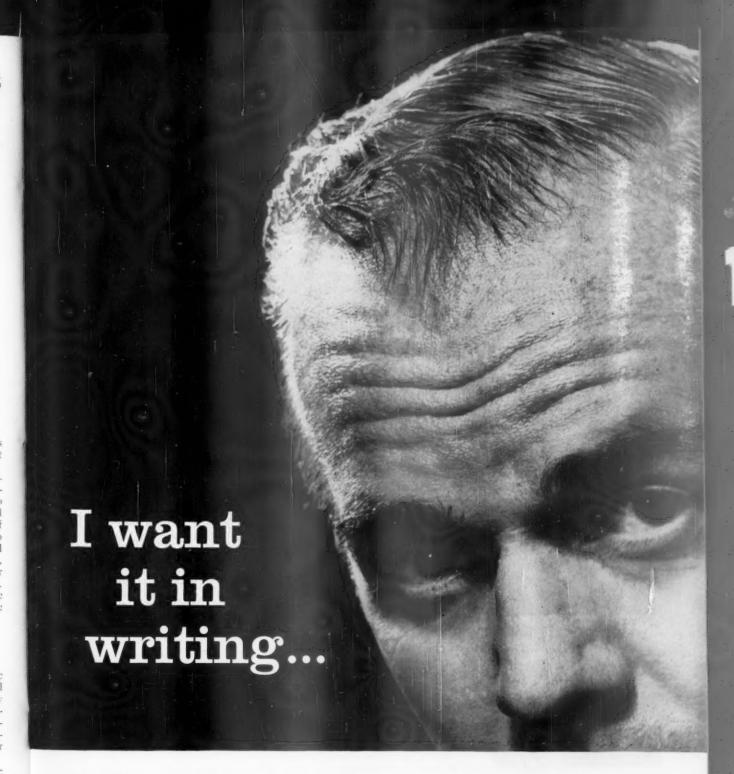
What particular petrochemicals will the industry be stressing in the next several years? Probably the best clue to the answer is found in a look at the building block for which the companies are spending the most to add capacity. It usually takes up to two years to move facilities from the drawing board to completion. Current planning indicates that industry growth is anticipated in these areas in the years to come:

Ethylene is the industry's brightest hope, even though it's in overcapacity at the moment. Announced expansions will soon bring total capacity to 6-billion lb. annually, most of it still ticketed for use by the petrochemical producers themselves for processing into other items. More than 25% of the total will probably continue to be

used in manufacturing the plastic polyethylene. Other end uses expected to increase demand in the next few years include ethylene glycol (for antifreeze), acrylonitrile for synthetic rubber, polyglycols (water-soluble lubricants), and ethanolamines (solvents for fats and oils).

Propylene is another of the indutry's important building blocks, but capacity for producing propylene has been expanding much more slowly than that for ethylene. Propylene chiefly goes into the thermoplastic, polypropylene. But there are steadily growing markets for its other derivatives, such as isopropanol (an intermediate material of many uses), acrolein (used in making plastics, perfumes, and colloidal forms of metals), and cumene.

Butylene is probably less reliable as



tell me by telegram!

I get your message at a glance...give it my immediate attention. Facts and figures are clear and in writing. I save time and money doing business by telegram. You, too?

WESTERN UNION

From the store around the corner, to the largest corporation . . .

WEBSTER ELECTRIC HAS A BUSINESS "VOICE" THAT FITS EXACTLY!

You can be sure your internal communications are right for your business by selecting one of these complete systems: Teletalk ... Telecom ... Webster Sound. It's the most versatile and extensive line of business communications available today!

Each system meets a specific requirement for fast, efficient contact between people and departments. Each is available in a wide range of models and special features. Each can be expanded or adapted to fit your business, your personnel exactly!



Prestige intercom! Advanced design - 6 to 60 or more stations. For communications, paging, general announcements, data gathering.



Automatic dial telephone intercom. Ideal for widely scattered stations. Operates just like your city phone.



Custom engineered and assembled sound components for communications, paging, music distribution.

Write for colorful fact folder.

COMMUNICATIONS DIVISION







an indicator of future directions. It has been growing faster than any of its immediate petrochemical relatives, but mainly because it's in demand as a blending stock for high-octane fuels.

Acetylene capacity expansion could signal a real burst of petrochemical expansion. It is used as an illuminant, for welding metals, and in the production of acetic acid, acetaldehyde, polyvinyl chloride, aniline dves, and synthetic rubber.

The refining of crude oil has been the principal source of ethylene, pro-pylene, and butylene, but currently less than one-third of the nation's acetylene comes from petrochemical plants. The rest, more than 1-billion lb. worth a year, is derived from calcium carbide, an inorganic material. If process development turns out successfully, though, it should be possible to make acetylene from natural gas for 10% to 12% below present prices.

At this rate, acetylene might be a vigorous rival of ethylene and propylene, and the industry might start energetically adding to its acetylene

capacity.

V. Is an Industry Crisis Inevitable?

As the petrochemical industry faces its future, it is debating whether a surge of competition from the oil companies will cause a real crisis.

Strong arguments can be mustered on both sides of the question. The major oil companies have financial strength to back expansion into petrochemicals. They also have the advan-tage of a foothold already secured in petrochemicals, through their status as major suppliers of ethylene, benzene, styrene, and propylene. Petrochemical patents are in most cases available for license to outsiders. The oil giants thus have the power to churn up the industry.

What's more, some of the petrochemical companies suffer from a builtin liability. In the effort to put production facilities onstream quickly, when the industry was in its fast-growth stage, they signed long-term purchase contracts for raw materials from the oil companies at prices above today's competitive levels.

• Pitfalls-However, there's more to entering the petrochemical business than installing basic production facilities. Newcomers may have trouble at technical tasks such as making com-plicated high-pressure, high-temperature syntheses come off properly. In any case, today's plants and processes will almost certainly be technologically obsolete in five to ten years. To keep up with the pack, everyone in the industry will have to figure on replacing facilities when obsolescence comes.

"The oil industry, with its giant size and dollar strength, can make it rough for petrochemical producers for a while," says one observer of the business. "But there's no proof yet that more oil companies will break into the top echelons of the industry.

• Different Businesses—To be sure, the oil and petrochemical industries are kindred spirits in some respects. For the most part, they both consist of giant corporations, with millions of dollars worth of plant and equipment and sales volumes running far into the billions. But they're also quite different.

In oil, the stress is on high-volume, low-cost products; in petrochemicals, a

total year's production run of a material may be counted in hundreds of pounds. Oil refineries look pretty much the same, wherever they are; petrochemical facilities differ widely in design. The oil industry's basic product lines are relatively simple and slow to change; petrochemical products change rapidly. · Slower Growth-Whether or not oil companies invade petrochemicals en masse, though, the industry will probably have to contend with a decreasing growth rate. Instead of growing far more swiftly than the nation's economy as a whole, the industry is settling down to a rate closer to the over-all average. This probably means that, at least through 1965, its growth rate will decline. Adjustment to this slower growth will be hard for the entire industryand harder if it contains more companies than before. But the industry will still be growing.

Over the long run, it's certain that the powerful petrochemical producerscompanies such as du Pont and Carbide-will exert every muscle to make sure that this growth will continue.

REPRINTS AVAILABLE

Single copies of this special report will be available in about four weeks to business week subscribers upon request without charge. Other copies will be billed at 50¢ each. Prices on quantity orders on request. Address orders for reprints to Reprint Dept., Business Week, 330 West 42nd Street, New York 36, N. Y.

ASSEMBLY LINE PRODUCTION OF BIG, COMPACT V-DIESELS

TO GIVE YOU ECONOMICAL HORSEPOWER

Caterpillar is the <u>only</u> manufacturer building "V-12" diesels of this size and horsepower on a moving assembly line basis. Mass production from the world's most modern diesel engine plant is your assurance of highest value. And this production is backed by substantial investments for engineering and research programs.

Hundreds of thousands of Cat Diesel and Natural Gas Engines are in use throughout the world. In fact, Cat Diesels power more construction equipment than all other makes combined.

Hundreds of engine configurations are available for use in diesel and natural gas electric power applications, marine, industrial plant, excavator,















drill rig, irrigation pumping, rock crusher, sawmill, pipeline pumping, compressor, etc. You can choose from 50 to 730 HP and up to 400 KW.

Should you have an interest in using Cat Engines in your manufactured product or in specifying for any application, write to Department CS-8, care of Caterpillar's Engine Division. Ask for complete catalog of engine models and specifications.

CATERPILLAR

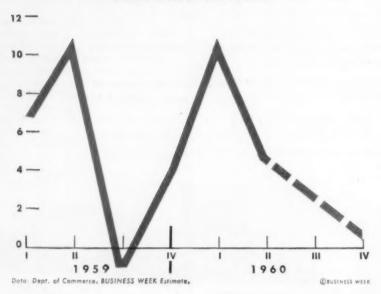
Engine Division, Caterpillar Tractor Co., Peoria, Illinois, U.S.A.

ECONOMICS

Why the Inventory Slowdown

Rate of Inventory Accumulation

Changes in Nonfarm Business Inventories, Seasonally Adjusted
Annual Rate in Billions of Dollars



Business Shaves Its Inventory Ratios

INVENTORY-SALES RATIOS

TOTAL TRADE AND MANUFACTURING	1949-1957 AVERAGE . 1.56	1959 1.45	
RETAILING			
Nondurables		1.10	
Durables	CONTRACTOR STATE OF THE PARTY OF THE PAR	1.82	
Lumber building, and hardware	2.70	2.35	
Furniture and appliances	2.44	2.15	
Automotive	1.24	1.28	
WHOLESALING			
Nondurables		.77	
Durables	1.45	1.40	
MANUFACTURING			
Nondurables	1.56	1.44	
Durables	2.04	2.00	
Transportation equipment			
(excluding motor vehicles)	3.27	3.12	
Motor vehicles and parts	1.51	1.37	
Nonelectrical machinery	2.64	2.20	
Electrical machinery	2.29	1.92	
Fabricated metals	2.00	1.78	
Primary metals	1.62	1.88	
Lumber and furniture	1.63	1.87	
Stone, clay, and glass	1.50	1.76	
Data: National Industrial Conference Board.	STATE OF THE PARTY	ENUSINESS WEEK	

The chart at left is a picture of an unpleasant surprise. Up to a few weeks ago, almost all forecasters had predicted that inventories would be a stabilizing factor for the rest of the year. They expected inventories to build, as in the second quarter, at a steady annual rate of about \$5-billion.

Instead, it now looks as though the rate of growth will be radically less. Businessmen probably will not actually cut their inventory holdings during the rest of the year, but they will add to them more slowly.

• Closer to the Vest—This sudden cutback in prospective inventory building has two important implications:

For the short run, it further discourages the already sluggish upward course of business. Net additions to inventories count in gross national product; if they shrink, it means that GNP can't continue to inch upward (BW—Jul.23'60,p25) unless consumption, capital spending and government outlays pick up the slack. And the prospects for consumption and capital spending are not robust.

For the long run, it is one of the clearest signs yet that the great postwar boom is over—or at least has undergone a radical change in character.

During that great boom, which ended with the 1957-58 recession, business hedged against price rises and against capacity shortages among its suppliers by keeping inventories high. But the need to hedge has passed. Reflecting their sober, cost-conscious mood (BW-Aug.13'60,p25), businessmen now intend to work on lower stocks, whatever the volume of sales.

• A Definite Corner—Economists woke up to the reality of the shift in inventory policy only a few weeks ago when the June figures came in for manufacturers' sales and new orders.

In five prior months, new orders had fallen below sales—a trend that means, when sales are rising as they were this year, that comparers are attempting to make their inverse go farther. They carry less inventor, year unit of sales.

Economists knew this had been going on since New Year's Day, but they were confident that it wouldn't continue in June. By the end of May, inventories were already low in relation to sales, by postwar standards. Then June ran the same way, winding up with manufacturers' order backlogs \$4-billion less than in January.

That finally convinced economists that a basic change had taken place in inventory policy, and forced them to



It's important for a Chemical Company to be "fast on its feet" too

Growth and Service are almost synonymous in today's dynamic chemical industry. That's why alert, heads-up customer service is the keystone of Pittsburgh Chemical Company's growth program.

You'll see Pittsburgh Chemical service in action almost any evening at our Neville Island chemical plants. The lights are burning brightly and dinners are being missed as we load a tank truck with a late afternoon order of plasticizers for "must" delivery 500 miles away the next day.

You'll see it in action on the floor of your plant as one of our engineers works with yours to lick an application problem. And chances are, he won't leave until he's helped you reduce costs, improve quality or increase profit.

Fast on our feet? You bet we are. Write, wire or phone us by our new name-Pittsburgh Chemical Co.-and watch things happen . . . for you!

A Basic Producer of INDUSTRIAL CHEMICALS . ACTIVATED CARBONS PROTECTIVE COATINGS for Chemical . Paint . Plastics . Petroleum . Marine

and Process Industries



PITTSBURGH CHEMICAL CO.

GRANT BUILDING PITTS BURGH 19. PA.

A Subsidiary of PITTSBURGH COKE & CHEMICAL CO.

1748

Regional Sales Offices: Pittsburgh . New York . Nashville . Chicago . Houston . Los Angeles . San Francisco



reduce their inventory estimates for the second half. Now they're also going back to fundamentals to see why the policy switch took place and to assess its impact on the economy.

I. Businessman's View

During the past few weeks, BUSINESS WEEK reporters have been talking to executives in key industries all over the country about their inventory policy.

The thing that stands out in what they say is that ever since the cost-cutting days of the 1957-58 recession, companies have been keeping their inventories much closer to their corporate vests. In describing the change after that recession, an executive of a large Pittsburgh electrical company seemed to speak for most businessmen when he said: "We learned to live with smaller inventories, and we only changed our policy to hedge against a shortage during the steel strike. Right after the strike, we went back to playing it close; it's cheaper."

• Changed Conditions—In explaining why the change took place, executives point to the effect on delivery dates of the shift from a high-demand, tight-capacity situation to a low-demand, excess-capacity situation.

A steel warehouse operator explains the change this way: "Before the 1959 steel strike and also before 1958, deliveries took 90 to 120 days. In some cases now, you place your order and jump back, or it's likely to fall on you. We place orders for deliveries up to 60 days, but on some new orders we get deliveries in three or four days. We just don't need as much inventory as we used to."

The relatively stable price level since 1958 has given business an added reason to hold inventories down—particularly with the tight money policy that has been in effect since then. A Boston manufacturer sums up the situation: "With money costing 5% now, you have to expect an increase of at least 6% a year in the price of goods you are holding, before you can make money on inventory speculation. This type of price increase just isn't in the cards these days."

• Firm Intentions—In talking about their plans, most businessmen interviewed by BUSINESS WEEK reporters said that they would continue their low-inventory policy as long as the present ample capacity and stable prices exist. Some companies in the durable goods industries, where demand has been below expectations this year (BW—Jun. 4'60,p19), seem bent on actually cutting inventories during the remainder of the year.

The new inventory policy is widespread. In talking about inventory policy, economists are fond of using a gadget called the inventory-sales ratio. This is a good measure of how high or how low inventories are in relation to sales in a given month. An inventory-sales ratio for a longer period is simply an average of the monthly ratios. As the table on page 75 shows, most industries in 1959 held their inventories lower in relation to sales than the postwar industry average. And they're still doing so.

II. Easier to Do Now

Now that changed economic conditions call for a low inventory policy, business finds new ways of carrying it out without pain:

Transportation improvements. In talking to executives, BUSINESS WEEK reporters found that the increasing speed and flexibility of the transportation system is probably the most important technological factor that allows companies to cut inventories.

The switch to truck transport has greatly increased delivery speed; the growth of private truck fleets offers "unitized" control of deliveries and production, allowing closer synchronization of operations and cutting the need for stocks.

Because of better methods of car marshaling, including automated makeup of trains, the railroads have also succeeded in improving their delivery schedules.

Improved warehousing practices. In the postwar years, industry has succeeded in rationalizing its warehousing and sub-assembly procedures.

In some industries, such as softgoods retailing, this shows up in the growth of centralized warehousing, which allows distributors to cut the inventories held in their retail outlets, yet spreads the risk of running short at any one point.

In other industries, it shows up in decentralization. Durable goods manufacturers, especially, have regionalized their sub-assembly and warehousing procedures. For example, Lone Star Steel, an important supplier of oil-field equipment, has placed facilities right in the heart of the Texas oil country.

Formerly, when somebody was drilling a well, he would stock up on everything he expected to need. Today, he'll buy drill pipe but won't order casing pipe until he knows he's got a well. Again, the risks of running short are spread, reducing the need for inventories.

New methods of inventory control. Aided by the spreading use of computers and the growing application of operations-research techniques, businesses have been able to tighten their administrative control of inventories, allowing them more readily to cut their

more companies depend on Hertz Rent A Car because

with *HERTZ* you can rent it here...leave it <u>anywhere!</u>



Hertz rents spanking new, sparkling clean Chevrolets and other fine cars

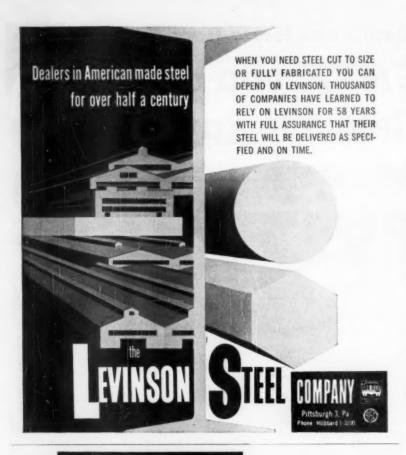
Hertz means dependable service everywhere!

Hertz is the world's largest rent a car service with the most complete network of car rental offices. Hertz has the only "Rent it here . . . Leave it there" service that's available not just in some towns, but everywhere. Using the Hertz system, a businessman can fly to one city, rent a car, and cover the most territory in the least time. When he winds up his trip, he leaves the car at the nearest Hertz office and flies back home. Even the tightest schedules can be met because you get the same quick and reliable service in every Hertz office, everywhere you go. Get HERTZ AUTO-matic Charge Card* and Central Billing service for your company. Find out how easy and practical business-car renting can be!



HERTZ puts you in the driver's seat!

*Charge Hertz service with your HERTZ AUTO-matic Charge Canji, Air Travel, Rail Travel, American Express, Diners' Club, Hilton Carte Blanche or other accredited charge card,





surplus stocks of slow-moving items.

• On the Demand Side-Important shifts in demand have also cut the need

for inventory:

 Non-durable goods production and distribution require lower inventories than do the durable good industries, as the table on page 75 shows.
 Demand has been shifting to the nondurable sectors in recent years.

 There has been a shift in demand toward service industries, which

require little inventory.

• Recent changes in defense hardware have been away from airframe production that needs a lot of material toward missile production that needs a lot of engineering; defense contractors respond by stocking engineers rather than materials. In explaining their reduced inventory requirements, executives of companies heavily involved in defense work also point to the growing share of the defense dollar that goes into research contracts.

III. May Help Stability

Although economists are worried about the short-run effects of the new look in inventory policy, they are hopeful that, in the long run, it may damp down inventory swings and thus enhance the stability of the economy.

Shifts from inventory-building to inventory-cutting have been a prime contributor to post-war business cycles—particularly to the downswings. Inventory-building accounted for an average of 6.2% of the rise in GNP during the postwar upswings before the present one, and inventory-cutting for an average of 65% of the fall in GNP during postwar downswings.

Magnified Effect—Despite this volatility, economists don't feel that inventory swings are ordinarily an initiating factor in business cycles. They argue that businesses change their inventories mainly in response to expected changes in their rate of sales. Inventory movements in business cycles, they say, merely magnify the effects on GNP

of changes in sales.

This magnification works something like this: If companies expect sales to rise by say 10%, they will increase their purchases by more than 10%, because normal inventory-sales ratios are greater than 1 to 1 for the economy as a whole. If companies expect inventories to fall by 10%, they will likewise cut their purchases by more than 10% for the same reason.

 More Stable Now?—Some economists expect less volatility of inventory movements, hence a bit more stability in the economy, now that the ratio of inventories to sales is already relatively low. The amount by which changes in sales are magnified by changes in inventories will be less than it has been. END





BEFORE

AFTER

(...the important change is inside)

Modernizing with Air Conditioning helped increase the occupancy of this Los Angeles building to 99%



A typical, modern, air-conditioned Fidelity Building office.

"To meet increasing competition from new office buildings," reports Mr. George D. Rowan, President of R. A. Rowan & Co., "we air-conditioned our

Fidelity Building completely in 1956. Results have been outstanding. We now have less than 1% vacancy in this building. Equally important—we also have highly satisfied tenants, who like the building and want to stay in it."

In any section of the country, in almost any building, air conditioning can help bring you longerterm rentals and more complete occupancy. Equipment manufacturers can provide you with efficient as well as economical systems for a wide variety of conditions. Most of these systems are charged with Du Pont "Freon" refrigerants—known for their safe, trouble-free performance.

For details on economical air conditioning for existing buildings, contact an air-conditioning equipment manufacturer or your nearest air-conditioning contractor.

*Du Pont's registered trademark for its fluorocarbon refrigerants.



BETTER THINGS FOR BETTER LIVING . . THROUGH CHEMISTRY



in packaging

Weyerhaeuser (Ware'-hous-er)

is pronounced

Ingenuity (In-je-nu'-i-ti)

If there were a popular demand for autumn leaves, Weyerhaeuser Ingenuity would package them to give you a selling advantage.

Much more goes into Weyerhaeuser cartons than the contents they protect. Each represents the skills and experience of a large team of packaging specialists. From timber—grown as a crop—to merchandising excellence, every step of production is carefully planned to satisfy and economically meet the needs of each carton user.

Impelling design for high shelf-appeal, plus high-fidelity printing, gives Weyerhaeuser cartons the "quality look" that attracts self-service shoppers. Carton uniformity speeds filling and closing, reduces costly rejects. Shipments-aspromised enable users to maintain efficient production.

Working with Weyerhaeuser is a pleasing experience in carton ingenuity. We invite your challenging problems.

ASK FOR FREE BOOKLET—This informative "Ingenuity" booklet colorfully explains how Weyerhaeuser can serve you. It shows not only how Weyerhaeuser works but what Weyerhaeuser will do for you.





Weyerhaeuser Company

Boxboard and Folding Carton Division

Headquarters: 919 North Michigan Avenue · Chicago 11, Illinois

INTERNATIONAL OUTLOOK

BUSINESS WEEK SEPT. 3, 1960



Washington thinks that its chances are good for getting more than it gives in the general tariff negotiations started this week in Geneva. If this happens, it will be for the first time in the history of postwar tariff-cutting.

Behind Washington's hopes is the serious deficit in the U.S. balance of payments. Most European trade officials, fearful of a U.S. swing toward protectionism, are inclined to be more generous this year with Washington.

But that's not the only reason for optimism. The new truce between Europe's rival trade blocks, the Common Market and the European Free Trade Assn. (EFTA), means they will bargain seriously to lower trade barriers between each other. Indirectly, this would benefit the U.S. and other GATT (General Agreement on Tariffs & Trade) members under the most-favored-nation principle.

In its first sessions, which may drag on through fall, the GATT meeting will concentrate on the effect of the Common Market's tariff on world trade.

Then, in January, members of GATT will begin bargaining with each other for lower duties—with the six Common Market countries participating as a unit.

The U.S. delegation, headed by Clarence B. Randall, is in Geneva with a long list of products for which it will seek more liberal treatment by the Common Market countries. High on the list are tobacco and other agricultural products, automobiles, steel products, and a number of chemical products.

The GATT negotiations will be separate from efforts to find a way of merging the Common Market and EFTA. These efforts, begun by West Germany's Chancellor Adenauer and Britain's Prime Minister Macmillan, will go forward slowly over the coming months at a higher political level than GATT.

The U.S. is continuing its campaign to solidify relations with Latin America. It will participate in next week's meeting of the Organization of American States' Economic & Social Council in Bogota, Colombia.

Main topic of discussion will be Pres. Eisenhower's proposed \$500-million economic aid program. It calls for a new hemisphere economic planning organization to coordinate U. S. aid, trade, and investment.

The U.S. may be in for rough sledding. The program has been criticized in the U.S. and Latin America as too little and too late. Some critics also think it too idealistic and vague. Many of the procedural details will be left to the new U.S. Administration.

U.S. policymakers believe they have accomplished what they set out to do at last month's OAS meeting in San Jose, Costa Rica. Resolutions condemning the Trujillo dictatorship in the Dominican Republic and indirectly censuring the Castro regime in Cuba are isolating the two islands from the rest of the hemisphere.

Washington expects Caribbean tensions to increase. The resolutions have stung both Trujillo and Castro into strengthening their positions at home. And both have lashed out anew at the U.S. and the OAS.

Washington now plans no further moves against Trujillo and Castro.

INTERNATIONAL OUTLOOK (Continued)

BUSINESS WEEK SEPT. 3, 1960 The Administration will see to it that the Dominican Republic gets none of Cuba's reduced sugar quota. Other economic sanctions, such as embargo on exports to the two islands, will be held in readiness.

Long-range aim of this policy is a change in governments in Cuba and the Dominican Republic. But the U.S. will shun the role of direct executioner. Washington will leave them alone in hopes that their regimes will be ended by political pressures from within.

The U.N. is strengthening its position in the Congo, despite Soviet meddling, continued violence, and confusion.

It won a victory over Congolese Premier Patrice Lumumba this week when a conference of African nations, meeting in Leopoldville, rebuffed Lumumba's plea for an all-African army to replace U. N. forces.

While Lumumba sulked, the conference voted instead to urge Lumumba to cooperate with the U.N. At the same time, the Congalese Senate, which has some anti-Lumumba members, passed a resolution backing up the U.N.

With all this, Dag Hammarskjold is determined not to let the U.N. be forced out of the Congo—even if Lumumba orders it—until order is restored.

Although Congolese opposition to Lumumba appears to be gaining strength, Lumumba is getting more support from Moscow. At least 125 Soviet bloc advisers—mostly Russians—are now in the Congo. And at midweek, the Russians put a squadron of Ilyushin-14 air transports at Lumumba's disposal for flying troops to the Katanga frontier.

Just as tensions appeared to be easing a bit in the Middle East, a new spark was struck this week with the assassination of Jordan's Premier Hazza Majali.

Almost immediately, King Hussein charged that "responsible people" in the United Arab Republic were linked with the bombing. The U.N. sent its Middle East chief, Pier Spinelli, to Amman to deal with the crisis.

Many observers agree that the assassination probably was engineered by hot-headed Jordanian exiles in Syria, without Pres. Nasser's knowledge. It's doubtful that Nasser would want Jordan at this point, since its foreign aid needs of \$40-million a year would make the country an expensive prize.

Russian and Chinese Communists are stepping up their efforts to convince the Japanese that a neutral policy will pay off.

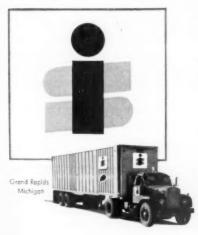
Chinese Communist Prime Minister Chou En-lai this week told visiting Japanese that Peking is willing to trade with Japan even though Japan does not officially recognize the Chinese Communist government.

In Moscow, Soviet Premier Khrushchev told Japanese Socialists that Russia would consider returning two southern Kurile islands, occupied by Russia after World War II, if the Japanese will oust the U.S. from Japanese bases.

There's little expectation that Japan's conservative government will make a deal with the Communists so long as Japan's export markets in the West keep expanding.



Shipping Power Applied to Horsepower!



Interstate System has been making on-time deliveries to the automotive industry for more than 34 years!

This is the kind of LTL and truckload service that separates the wheat from the chaff. Interstate System offers direct, single-line, scheduled service to more than 9,000 points in 24 states — the fastest, most convenient deliveries in the industry. If you and your company are not now enjoying this kind of shipping power, you should be. Call the Interstate System transportation specialists. We're in the Yellow Pages.

INTERSTATE SYSTEM

MORE THAN A TRUCK LINE . . . A TRANSPORTATION SYSTEM

Do you have any of these

COST-CONSUMING BUSINESS PROBLEMS?

NEW CLUPAK CAN HELP SOLVE THEM ALL!

read how ...



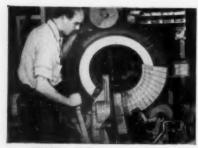
MULTIWALL BAGS made of Clupak extensible paper simplify on-the-job handling . . . allow more compact stacking . . . less re-packaging . . . even with lower basis-weight paper.



WRAPPING ODD SHAPES is no problem with Clupak extensible paper. Flexibility and stretch prevent tearing . . . toughness reduces shipping damage.



SHIPPING MATTRESSES in Clupak extensible paper gives you a reduction in paper basis weight, a saving in bag cost, while providing extra toughness.



WRAPPING TIRES with Clupak extensible paper yields better conformation to the irregular outline, plus stretching with the



MATERIAL DAMAGE in lumber yards is reduced when expensive doors and wood moldings are wrapped in shock-absorbing Clupak extensible paper.



BOAT PACKAGING wih Clupak extensible paper gives you better protection against damage because Clupak molds itself to the boat's outline without tearing or ripping.



GROCERY BAGS made of stronger Clupak extensible paper absorb shock, remain intact. That's because this revolutionary new paper has a patented built-in stretch or "give."

EXTENSIBLE PAPER FREIGHT SHIPPING BAG MEETING REQUIREMENTS OF RULE 40 Applicable Freight Classification



FREIGHT SHIPPING BAGS made of Clupak extensible paper meet all requirements of Rule 40. The paper's built-in stretch absorbs the shock that splits ordinary bags.

Shown above are but a few of the unlimited applications of Clupak extensible paper for business and industry. Specify "Clupak" the next time you order paper or paper products. Your paper salesman will tell you how Clupak extensible paper can benefit you in your business.

Revolutionary new material cuts packaging costs!



In Business Abroad

Pacts With Ghana and U.A.R. Put Russia Deeper Into Africa

The Soviet Union's economic offensive has cut deeper into the African continent with the signing of a \$40million trade-and-aid deal with Ghana.

The pact caused some concern in Washington, where U.S. officials are helping to work out financing for a proposed \$304-million hydroelectric power and aluminum development project on Ghana's Volta River (BW-Aug.27'60,p36). Kaiser Industries leads a consortium of aluminum producers involved in the project.

By signing the agreement, Ghana paved the way for the Russians to pick up the Volta plans if the West should drop them. The pact says Russian assistance can include help in developing power and mineral projects in Ghana. Other terms call for Russia to provide Ghana with machinery and equipment in exchange for cocoa, rubber, coffee, and other agricultural products.

Last week, Soviet officials signed an agreement with the United Arab Republic providing an additional \$225million for Cairo's Aswan Dam project. The Russians already are providing equipment and assistance under a \$100-million loan agreement signed last year.

Auto Makers Converge on India To Sell Plans for 'People's Car'

Auto company representatives are rushing to India with plans for a mass-produced "people's car" from Britain, West Germany, France, Holland, Italy, Czechoslovakia, and Japan.

The men are presenting their plans to an "Experts' Committee" appointed last month to determine whether a home-produced small car would benefit India's economy and whether any foreign models would suit India's needs.

For some time, the Indian government has had the idea that the country might be ready to produce its own small, four-passenger model, selling for about \$1,300. Because India is short on foreign exchange, imports are out of the question. The three-man "Experts' Committee" is expected to submit recommendations to the government in about four months. Only one Indian company-state-owned Hindustan Aircraft-has submitted plans for the proposed car.

Planes Moscow Seeks to Export Are Grounded After Crash

The commercial airliner that Russia is trying to sell outside the Soviet bloc (BW-Aug.27'60,p107)-the Ilyushin-18 turboprop-has been grounded by Soviet authorities following the crash of an Il-18 on the Cairo-Moscow run. Prior to the crash, Western airline representatives in Moscow had advised Aeroflot, Russia's stateowned airline, to correct a vibration that pulsed through the fuselage every 2½ seconds. The Russians had replied to these officials, who coordinate their airline activities with Aeroflot, that the vibration was being corrected. Aboard the Il-18 from Cairo were Africans en route to Moscow to observe the trial of U-2 pilot Francis Gary Powers.

Remington Rand Plans European Plant To Make Typewriters for U. S. Market

Remington Rand, under pressure from foreign competition in the U.S. market, plans to transfer production of standard and portable typewriters from Elmira, N. Y. to Western Europe, probably next year. The site has not been announced. The company will export typewriters to the U.S. from its overseas subsidiary.

A similar move to Britain was announced earlier this year by Smith-Corona Marchant (BW-Jun.11'60,p132).

Brazilian Private Capital, Thwarted At Home, Will Develop Bolivian Oil

Brazilian private capital, barred by law from engaging in petroleum production at home, is preparing to show what it can do in the way of oil development in neighboring Bolivia. If results are successful, they may prove embarrassing to Brazil's state-owned oil monopoly

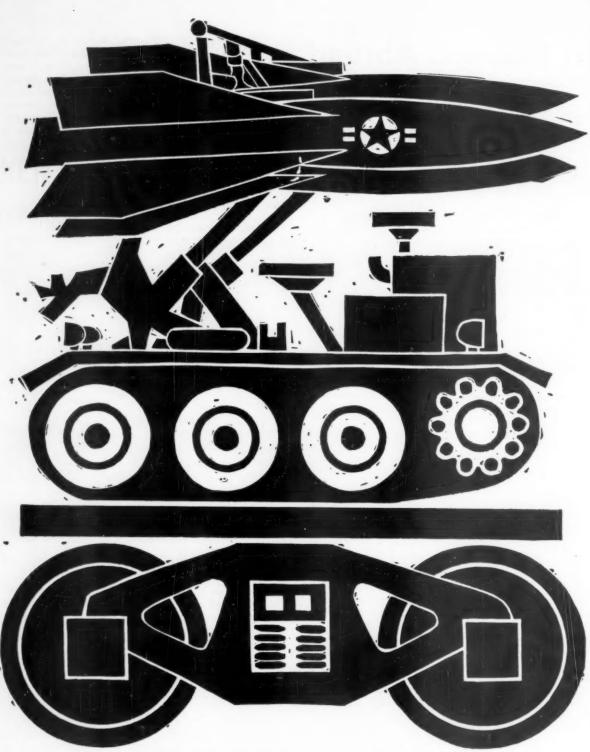
Brazil acquired oil rights in Bolivia by a 1938 treaty under which Brazil built a railroad for Bolivia. After waiting nearly 20 years, Bolivia told Brazil to start working its 2.8-million-acre oil concession or lose it.

Since Bolivia's oil code excludes foreign state-owned agencies from operating within the country, the development job went to four private companies-against the wishes of Brazil's state company, Petrobras, which would like to work the concession itself. One of the companies has completed initial survey work and is preparing to sink its first test well.

Business Abroad Briefs

Dow Chemical Co. has bought a half-interest in a Spanish chemical company, Union Quimica del Norte de Espana, for \$9-million. The Spanish company will expand its petroleum facilities.

West Germany's textile industry, beset by a serious labor shortage, has gone to Northern Ireland to recruit linen workers for its automatic looms and spinning and winding machines. West German textile companies are said to have more than 10,000 vacancies. Northern Ireland has about 1,500 unemployed linen workers.



in any future national emergency, the principal burden of transportation will fall upon the railroads (in World War II, 90% of all military freight moved by rail).

In everyone's interest, public policy should give the railroads the opportunity to compete with other forms of transportation on a fair and equal basis. ASSOCIATION OF AMERICAN RAILROADS, WASHINGTON, D. C.

THE MARKETS

Disorder in Stocks

Wall Street got a graphic demonstration this week of what happens when speculators run wild with a stock. Two companies—Comptometer Corp. of Chicago and TELautograph Corp. of Los Angeles—shot up in hectic and disorderly trading (charts).

On Monday, things were so confused that New York Stock Exchange officials first refused to allow TELautograph to trade at all, then canceled all stop-loss orders in the stock. Comptometer, for its part, led the day's market in trading activity, with over 174,000 shares changing hands; it rose over \$4, to close at \$24.

Tuesday, the situation was much worse. Only TELautograph traded—and then not until 3:30 p.m., at the close of the market. It traded at \$24, up 5½ points over the Friday close, and over 17 points from its low for the year. Until that hour, it was simply not possible to match the flood of buy orders with corresponding orders to sell at what NYSE officials considered a reasonable price. Veteran floor traders said they could not recall any other instance when it had not been possible to open trading in an active stock for so long—in the absence of a general break in the market.

Wednesday, both stocks traded, but only sporadically, with trading halted in the morning almost as soon as it started. At the close, a block of 36,000 shares of TELautograph traded at 24½, and 34,600 shares of Comptometer at 30.

These gyrations touched off parallel investigations by both the NYSE and the Securities & Exchange Commission. In particular, the SEC was interested in tracing buyers and sellers in the two stocks to see if any pattern of manipulation exists; the NYSE pressed for a "complete explanation of recent events affecting the company." If the Exchange isn't satisfied with the answers it gets, it could take action against TELautograph, including a permanent suspension of trading in the stock.

• Spark—The frantic activity—and what amounted to a suspension of trading—was set off by a press release sent out by TELautograph on Aug. 24. It said it "had been notified by the American Telephone & Telegraph Co. that for the first time message rate telewriter service will be permitted over telephone lines on a local and longrange basis." This means, the company handout went on, "that it is now possible to send a hand written message by the use of the TELautograph Telewriter."

TELautograph never said so, but

word quickly spread throughout the Wall Street rumor mill that the company had the inside track on an exclusive setup to furnish telewriter service over AT&T lines. Comptometer came into the act when some security analysts pointed out that it also has an electronic writing device—called the Electrowriter—and has been working with AT&T to adapt it to the telephone system.

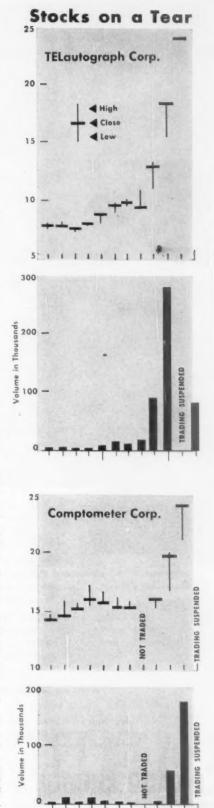
The boom in Comptometer shares is doubly significant because the company is currently trying to register with the SEC over 550,000 common shares, plus a big block of convertible preferred shares and debentures. About 350,000 of the common shares have already been issued in connection with recent Comptometer acquisitions. If and when the registration statement clears the SEC, the holders of this stock will be free to put it on the market.

• AT&T's Position—At midweek, the exact status with AT&T of the two competing writing systems wasn't clear. A spokesman for AT&T said that only the Comptometer system had as yet been tested by Bell System engineers and that TELautograph had simply received "an invitation" to come in on Sept. 13 and discuss the adaptation of its equipment to AT&T requirements.

Raymond E. Lee, TELautograph's 44-year-old president, took exception to AT&T's statement. "We already have 7.700 machines operating over Bell System lines on a private lease-wire arrangement," he said—and Bell confirms this.

But Lee admits that modifications of his company's equipment will be needed before it will be suitable for general use over the dial telephone system. He also indicates that there are still technical problems to be resolved concerning the frequencies at which AT&T will allow TELautograph to transmit messages over the dial network. However, the cost of message rate service, if and when it is initiated, should be well under the cost of a leased line-minimum cost for a line from New York to Los Angeles is estimated at \$3,300 a monthand should substantially broaden the market for electronic writing services.

• NYSE Action-At this point the NYSE moved in to clear up the confusion. It demanded that TELautograph issue a clarifying statement on its business status, the probable impact on its earnings of the new business over AT&T lines, and the background of a report that Olivetti, the Italian business machine manufacturer that controls Underwood Corp., has decided to cancel an option-at \$7 a shore in 1960



August 1960

Dala: BUSINESS WEEK



The imagination and Craftsmanship in Steel
which created this unique water storage tank for the
Hawaiian Pineapple Company more than 30 years ago are inherent
in each structure built by CB&I today.

At CB&I, the individual talents of research, engineering, fabrication and erection specialists are skillfully blended to build the very best . . . whatever the structure . . . however it will serve. These coordinated services are available to you . . . anywhere in the world!

Write for the brochure: "Tanks That Advertise."

Tanks and steel plate work for Municipalities... Aircraft, Chemical Process, Petroleum and Pulp and Paper Industries . . . and Industry at Large.

CHICAGO BRIDGE & IRON COMPANY



332 SOUTH MICHIGAN AVENUE CHICAGO 4, ILLINOIS

OFFICES AND SUBSIDIARIES IN PRINCIPAL CITIES THROUGHOUT THE WORLD.

and \$8 in 1961-it holds on 100,000 TELautograph shares. In Milan, Olivetti denied that any decision has been reached on the TELautograph option.

At a press conference, which was called as a result of the NYSE demand, Lee refused to back down on any previous statements. "We have been factual and conservative in everything we have said," he stated flatly. But Lee did admit that the company lost money during the first half, and that if Olivetti refuses to invest in TELautograph it might cause problems. "We lease our machines," he said, "and we're always in need of financing." He also acknowledged that it is anyone's guess when the company's new devices will be contributing to earnings.

• Overwhelmed—NYSE officials were

 Overwhelmed—NYSE officials were clearly concerned over their inability to keep trading going in the two stocks.
 The responsibility for maintaining a smooth market in a rapidly moving stock, rests, of course, with the stock's specialist. As part of his job of maintaining a smooth market he's expected to sell stock when the market is rising, going short if necessary, and to buy when prices are falling.

But the demand for TELautograph and Comptometer overwhelmed the specialists, and the normal machinery for running the auction market. John A. Coleman, the TELautograph specialist, who has spent his entire working life on the floor of the NYSE and whose firm, Adler, Coleman & Co., has a net worth estimated at \$10-million, balked at selling short the more than 80,000 shares that were needed to open trading in TELautograph on Monday. It was only by going short on a block of TELautograph that Coleman was able to open the stock on Tuesday afternoon.

A similar situation developed when Harold S. Stonehill, the Comptometer specialist, found buy orders for 66,000 more shares than there were sell orders.

A lot of brokers felt that the failure to open the stocks was a black mark for the Exchange. As one put it, "That's what you've got specialists for—to make a market when there's an imbalance between buy and sell orders."

(Under NYSE rules, all orders that come in prior to the opening—no matter what time that takes place—have to get equal treatment. At the beginning of every market day this leads to a succession of big blocks of stock changing hands, as overnight buy and sell orders are matched up.)

• Duty to Public—Exchange officials point out that both stocks could have been opened—if the price had been raised sufficiently to bring out the sellers. But this the NYSE was not willing to do. "That's not the way we operate," says an NYSE official. "We have to protect people from their own cupidity."



Teletype machines help cut costly paperwork

0

æ

et

TS

ve

11-

ıg

'n

50

A Teletype machine equipped with a simple sprocket-feed mechanism can handle multi-carbon forms as readily as the more familiar plain paper on which messages are transmitted. Thus distances can be bridged not only with information, but with information that is preprocessed, ready to go to work.

Example: A sales order is transmitted from branch office to home office and reproduced accurately and precisely on a form in the Teletype machine—with carbons for production, accounting, shipping, etc. No further order-writing effort needed, no recopying errors.

Teletype printers handle a wide variety of multi-copy forms. Moreover, the usefulness of this technique can be further extended with Teletype tape punching and reading equipment—which can capture, store and utilize repetitive data to further mechanize paperwork procedures.

Teletype Corporation manufactures this equipment for the Bell System and others who require the finest in data communications equipment.



Typing Tape Punc



Tape Reade



Send-Receive Page Printer Automatic



Automatic Send-Receive Set

FREE Model 28 line folder, Write Dept. 15J, 5555 Touhy Avenue, Skokie, Illinois.

TELETYPE

SUBSIDIARY OF Western Electric Company INC.

LOOKING FOR A PROFITABLE INVESTMENT

-ideal for absentee ownership



-you can be securely in a business which will produce well

above average earnings with only an operating manager supervising when you use motels pre-engineered by Hart Industries.

Hart Industries and Thrift Courts of America can deliver to your site full

furnished 3 and 4 room motel sections which can be arranged any way you like, or our engineers will plan—without charge—for you. The motel sections are made to meet or exceed most codes using only the finest of materials and equipment-you furnish only linens.

Attractive financing and leasing programs are available. If you are seeking such an investment, we will be happy to send you literature and case histories of profitable motel installations we have made. Hart Industries Has Never Installed A Motel That Didn't Make A Profit!

HART/INDUSTRIES 1662 W. Bristol, Elkhart, Indiana



Two Billion Tons of Proven Coal Reserves

... plus Peabody's continuous development of mining properties near the nation's inland waterways and major railways...offers your com-pany a dependable source of power for the years ahead. It means long term insurance to keep your plant and equipment operating . . . and eco-nomical operation because COAL is by far your lowest cost fuel.

Investigate Peabody's 26 modern mining operations—and tremendous reserves . . . reserves that keep you in the game!

Send for Peabody's new FREE booklet, "COAL . . . ANCIENT STOREHOUSE OF MODERN LIVING." Write Dept. BW.

PEABODY COAL COMPANY

Peabody Plaza 301 Olive St., St. Louis 2, Mo.

Wall St. Talks . . .

. . . about Telelectro Industries, Jersey Standard buying Monterey Oil, Japanese Securities Sales.

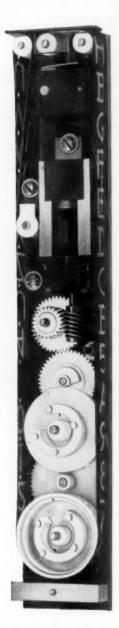
The fever for shares of companies that are building devices to transmit written information over telephone lines-which sent TELautograph and Comptometer on a tear (page 87)— proved contagious. On the American Stock Exchange, Telectro Industries Corp., which uses a special television camera to send still pictures over the telephone, jumped over 6 points-from 14% to 20 (1960 low: 11).

West Coast oil men take seriously the rumors that Standard Oil of New Jersey wants to buy Monterey Oil Co., a California crude producer. The price, brokers say, will be \$42 a share for Monterey, which is now trading about \$30. Neither Monterey nor Humble Oil & Refining Co., Jersey's domestic subsidiary, will comment on the report.

Two widespread rumors were flatly denied this week: (1) First National City Bank stated it would not follow Marine Midland Corp.'s entry into the small business investment company program (BW-Aug.28'60,p116), although it had considered the idea. It decided it could accommodate small business financing needs through existing channels. (2) Talk of merger between Eversharp, Inc., and Technicolor, Inc., of which Eversharp president Patrick J. Frawley is also a director, was scotched by Technicolor executives: We have never talked merger with Eversharp and we are not talking it now-with them or with anyone else.

Kidder, Peabody & Co. denies specific reports of a deal to float \$5-million worth of securities for Mitsubishi Electric Manufacturing Co., but it admits it is extremely interested in doing financing for Japanese companies on a basis that would enable American investors to buy stock as well as straight debt issues.

Shareholders of Delaware & Hudson Co., which has railroad and mining holdings, were pleasantly surprised when the company announced it was continuing its regular quarterly dividend of 50¢. The stock has recently been under pressure (in the first six months it earned only 63e) and sold down to 22 (1960 high: 28½) because of fears that the company would cut its \$2-ayear rate, which provides a yield of over



al

r, it

er, er

111

ts

15

)11

m

ht

m

ng

id

en

hs

to

ITS

er

60

Gears and rollers are molded of DELRIN in this view of the Post-Rite Data Indicator, used in traffic control and other systems. (Parts molded by Control Molding Corp., Staten Island, N. Y. for General Railway Signal Co., Rochester, N. Y.)

POLYCHEMICALS DEPARTMENT





Gear train of new Du Pont <u>Delrin</u>° speeds vital information to traffic control centers

Up-to-the-minute information on traffic, weather and other vital factors can be fed from computers and remote stations into banks of high-speed data indicators, so that an airway traffic controller, for example, can read it off immediately. Inside the indicator, a gear train actuates and guides a printed tape to the view port. The indicator must operate with extreme reliability, minimum maintenance and no lubrication. That's why nine parts of new Du Pont Delrin acetal resin were chosen for the complex gear train. Prolonged testing showed that the parts of Delrin far outlasted metal components under loads and speeds required . . . operating over 5,000.000 revolutions without lubrication.

This is one more example of the product improvements made possible by Delrin, a versatile new material that has already been put to good use in household items, telephone components, plumbing fixtures, clothing fitments and many other modern products. It may well help you make a better product. Find out more by writing to: E. I. du Pont de Nemours & Co. (Inc.), Dept. D-9-3, Room 2507D, Nemours Bldg., Wilmington 98, Delaware. In Canada: Du Pont of Canada Limited, P.O. Box 660, Montreal, Quebec.



All medium-quantity reproduction work at the Anaconda Company gets piped to an Ozamatic

Like many other progressive corporations, THE ANACONDA COMPANY's New York head-quarters office uses an OZALID Direct Copy System to obtain specific benefits in terms of costs and efficiency. An OZALID Direct Copy System means copies in seconds at less than one cent each for materials! OZALID's user advantages cover every phase of reproduction from routine letters to engineering applications. Why not do as ANACONDA has done... check an Ozamatic* direct copy machine. Just call your local OZALID representative today for details. OZALID, Johnson City, New York. A Division of General Aniline & Film Corporation.

In the Markets

Stock Prices Turn Down Again; Analysts Differ on the Outlook

Confusion among Wall Street professionals was evident this week. Stock prices moved lower. Some analysts felt this was a normal reaction to the strong upward surge evident through most of August. Others interpreted it as a sign that a downturn of substantial

proportions may be under way.

The confusion stems from the uncertainties over the business outlook. Last week, investors seemed to be feeling that the fall would bring an upturn in economic activity, and a rise in corporate profits. This week, brokers say their customers are shifting to the view that the fall rise may be of less than seasonal proportions, and that the prospect of any turnaround in the shrinking

profits picture is small.

Even if business turns out to be good this fall, it is questionable whether the stock market averages can approach their old highs. For when the Dow-Jones industrial index reached over 680 in early January, the belief was widespread that 1960 would be a record-breaking year for business. Now these expectations have been dashed, and although prices of stocks in many basic industries are depressed, a level of 625 on the Dow-Jones is still fairly high.

A decline seems more likely. For if business does not come up to expectations, or drags along at a sluggish rate, it will mean a further shrinkage of profits, and that might lead investors to become discouraged about the

prospects for equities.

Murchison Buys More Alleghany Stock Likely to Press Changes in Company

The Murchison oil interests have bought some 150,000 additional shares of Alleghany Corp. stock in what appears to be an attempt to influence changes in the holding company and one of its top profit-makers, Investors Diversified Services, a Minneapolis-based investment company. At the same time, though, John Murchison says he is anxious to avoid an "injurious" proxy fight

with Allan P. Kirby, Alleghany's chairman.

The Murchisons' Alleghany holdings are second only to Kirby's, who owns more than 11% of the 5.1-million outstanding common, warrants to buy 266,340 more shares, plus 10% of Alleghany's 6% convertible preferred. In February, the Murchisons obtained their large position by agreeing to pay \$10.2-million for 250,617 shares of common and 160,320 shares of 6% preferred held in the estate of the late Robert R. Young. But just before that agreement, they had agreed in a court settlement to hand control of IDS to Alleghany. Since then, Kirby and his associates have made several management changes at IDS that have upset the Murchisons.

Murchison won't go into what he expects to accom-

plish at Alleghany, but observers believe that he will try to get Kirby to make some new changes in the IDS setup, using the threat of a proxy fight only as a last resort.

Oppenheimer Fund Increases Commission To Dealers to 8½% to Promote Sales

Looking to increase the number of dealers selling its shares, Oppenheimer Fund, a \$4.6-million mutual fund, has upped its sales charge to 8½% from 1½%. At the same time, the fund has eliminated its 1% fee on re-

demptions of shares.

Oppenheimer started as a "low-load" fund because it did not want to incur the expense of a major distribution system. Its investment performance has been good, and now the fund executives feel that it can attract more buying. So it is offering a high commission to dealers in order to promote sales of its shares.

Since the fund's first offering on June 30, 1959, at \$10 bid, the fund's per share value has risen 23%; this year, despite the market slump, per share value is up 11%.

The fund's investment policies are more off-beat than most open-end companies. Under its charter, it is allowed to make short sales, to put up to 25% of its assets in one security, to borrow for leverage, and to invest in foreign exchange and commodities. For example, it now has 16% of its assets in Underwood for which it paid an average of \$27 per share; Underwood traded this week at \$55. It also has a short position in Chrysler, Ampex, and Kaiser Aluminum.

Anderson-Prichard Oil Discloses Deal To Sell Its Assets to Four Companies

Anderson-Prichard Oil Corp. this week spelled out details of the sale of its assets to four companies for \$123-million—and ended speculation of why its stock had risen from \$32 to \$44.50 since January, while other oil shares had been declining. Under the complex deal, Anderson-Prichard shareholders would receive \$50 a share, before expenses, provided they approve the sale.

This is the way the deal would work out:

 Brookston Oil Co., a Delaware corporation, would pay \$80-million for the rights to production payments from oil and gas leases; production payments come out of sales of future output. The money would be lent Brookston by a syndicate of banks and insurance companies.

Union Texas Natural Gas Corp. and the Frankfurt Oil division of Joseph E. Seagram & Sons, Inc., would pay \$17.1-million for the remaining gas and oil properties, undeveloped leases, and other assets. Union Texas would get a five-sixth interest, Frankfurt the re-

maining one-sixth in the properties.

• Apco Oil Corp., a newly established Delaware corporation, would buy the refining, marketing, and transportation properties of Anderson-Prichard for \$26.2-million. The money would be obtained partly from a \$12-million bank loan, partly from a package offering of securities by Apco to Union Texas stockholders.



TWU'S Michael Quill demanded ban on subcontracting maintenance work and on giving workers added jobs.



PENNSYLVANIA RR'S negotiator, Vice-Pres. James Newell, called TWU'S demands too costly, said management would lose decision-making power.

Head-On Clash on Job Security

At midweek, the nation's biggest and wealthiest railroad, the Pennsylvania, and organized labor's stormy petrel, Michael J. Quill, were locked in round-the-clock bargaining sessions to head off a strike that would close down the entire PRR system, serving a highly industrialized, 13-state area. It had become, suddenly, the most critical rail dispute in a year marked by serious railroad labor difficulties.

Whatever the outcome, the last-ditch negotiations brought to a head the particular clash of interest that is behind the year's rail labor troubles—the determination of management, beset by financial difficulties, to trim high labor costs by changes in the work force and work rules, against the insistence of railroad unions, already hit by heavy job losses, on preserving jobs. In the Pennsylvania dispute, job security became the big issue.

The opposing stands on the issue

had carried the Pennsylvania dispute through three years and three months of bargaining, mediation, fact-finding, and White House intervention. Then Quill's Transport Workers Union, representing some 15,000 maintenance workers on the Pennsylvania lines, set a "final" strike date for Sept. 1. It was against this deadline that the negotiators worked.

• Key Points—Two key demands were at the nub of the controversy—demands that the Pennsylvania claimed would not only be too costly for the railroad to accept, but would prevent management from making its own operating decisions.

In the dispute, the TWU, representing some 15,000 car inspectors, oilers, cleaners, and the like was joined by System Federation 152, representing about 5,000 maintenance craftsmen. (The Pennsylvania has 75,000 employees.) The two unions were asking:

• That the Pennsylvania end the practice of subcontracting out maintenance work and that no equipment be sold to other companies unless these companies agreed to use maintenance workers in the two unions.

 That the railroad set up a more rigid job classification system to prevent shifting of workers from one job to another—in other words, to prevent the assigning of the same worker to two different jobs.

The unions, in effect, were seeking to hold on to their own job assignments, and to spread the work through more detailed job descriptions.

• Ready—The top Pennsylvania RR negotiator, James P. Newell, vice-president of operations, said a strike would have "no justification." And, though the hot-tempered TWU president was proclaiming that the strike would come off on schedule, there was a persistent feeling at midweek that the dispute



You know steel is low in cost. How can you *keep* it that way? One way is never to forget that there's more to *final* cost than initial price. Hidden—and unnecessary—costs of possession, like handling, storing, cutting, taxes and insurance often creep in. Recognize these added expenses.

Each steel user's case is different. Your steel service center will be glad to help you determine the

most economical way to buy steel. Figure all your costs of possession, such as:

Cost of capital: Inventory Space Equipment

Cost of operation: Space Materials handling Cutting & burning Other costs:
Obsolescence
Insurance
Taxes
Accounting

Scrap & wastage Accounting

Call your nearby steel service center, or write for free booklet, "What's Your Real Cost of Possession for Steel?"



b

ıt

O

h

h

..YOUR STEEL SERVICE CENTER



"In my day, machine tools and other income-producing equipment were sold for cash on the barrelhead."



"Not today! C.I.T. finances practically any machine made—and that's not all."



Thousands of businesses use C.I.T. machinery instalment finance plans to make more sales, earn more profits. Many other companies have expanded their volume and profits through the use of working capital furnished by C.I.T. Corporation through machinery loans. To find out how C.I.T.'s services will help you, write to any C.I.T. Corporation office listed on the facing page.



Financing For American Business

C.I.T. Corporation is a subsidiary of C.I.T. Financial Corporation: capital and surplus over \$300 million



C.I.T. may have just what your financial program requires. Its service is prompt and thorough. Every officer on the list below is a financing expert. Write to the one nearest you.

C.I.T. CORPORATION DIVISION OFFICES

Atlanta 3, Georgia, 55 Marietta St., N. W. Edward H. Mayer

Boston 16, Massachusetts, 250 Stuart St. Donald E. Kidd

Chicago 1, Illinois, 221 N. LaSalle St. George A. Lear

Cleveland 14, Ohio, Leader Building Walter J. Rekstis

Dallas 1, Texas, 211 N. Ervay Building James A. Turriff

Denver 3, Colorado, 655 Broadway Paul F. Franklin

Detroit 26, Michigan, 1625 Cadillac Tower Wallace B. MacGregor

Houston 25, Texas, 1900 Prudential Building

Eduard Umbricht Jacksonville 7, Florida, 1710 Prudential Bldg.

Kansas City 5, Missouri, 427 West 12th St. Thomas L. Geiss

Los Angeles 17, California, 615 So. Flower St. Leo G. McGraw

Leo G. McGraw

Memphia 3, Tennessee, 2600 Sterick Bldg.
Charles F. Hodgins

Milwaukee 2, Wisconsin, 208 Wisconsin Ave.

Minneapolis 2, Minnesota, Rand Tower Harvey L. Kyle

New York 16, New York, One Park Avenue Eugene T. Neville Oklahoma City 2, Oklahoma, 203 Park Ave.

Oklahoma City 2, Oklahoma, 203 Park Ave. Earl E. Garrett

Philadelphia 2, Penna., 2 Penn Ctr. Plaza Daniel V. McCarthy

Pittsburgh 19, Pennsylvania, Porter Building John R. Luce Portland 4, Oregon, Equitable Building

Randolph J. McMaster Richmond 19, Virginia, 18 North Fifth St.

Eugene W. Ford San Francisco 4, Calif., 120 Montgomery St.

Robert Y. Mann
Scattle 1, Washington, Northern Life Tower
F. Leslie Conrad

In Canada: Canadian Acceptance Corporation Limited



FINANCING

would either be settled or the strike deadline put off to permit continued bargaining.

Both sides, however, had financial bulwarks against the drain of a strike. Newell estimated that a walkout would cost the carrier \$2.5-million a day. The Pennsylvania, however, belongs to a railroad strike insurance plan administered by the Imperial Insurance Co., Ltd., of Nassau, which reimburses a carrier for its fixed expenses during the length of a strike. In the recent 24-day Long Island RR strike, the rail line received \$50,000 a day in insurance payments. Pennsylvania officials made no estimate of their possible collections, though Quill came up with his own figure of \$600,000 daily.

Union members had their own form of protection in unemployment benefits. Under the special federal laws for railroad employees, strikers receive unemployment pay, provided their strike conforms to the terms of the Railway Labor Act—that means, provided the union has exhausted mediation and fact-finding remedies before striking. Benefits are \$52 a week, starting after the fourth day of the strike.

The PRR's Newell-retorting to TWU protests over the carrier insurance plan-assailed this system of carrier-paid unemployment benefits. He called it "an unconscionable situation which calls for prompt correction by Congress."

• Jobs, Not Wages—The accent on job issues and on the relation of work rules to labor costs, rather than on wage issues, in all of this year's rail labor difficulties is pointed up in the Pennsylvania dispute. The TWU's wage demand for a 35¢-an-hour increase was removed from the main dispute by sending it to arbitration.

The fact that wage issues have not led to strikes in the national rail negotiations between the carriers and the railroad brotherhoods, operating and nonoperating, is a further indication that job security is the year's overriding issue. These unions, with the help of a Presidential board, settled on new 5%-a-year contract hikes.

Not that the wage settlements came easy, or that there are not many tough railroad negotiations still ahead. The hardest settlement, of course, came on the Long Island RR—the only road hit by a monetary strike—where members of the Brotherhood of Railroad Trainmen successfully held out for a five-day week under their previous six-day pay scale. Even here, more than wages was involved; the union agreed to some money-saving changes in work rules to help the Long Island meet the higher payroll costs.

 Almost Insoluble—Actually, the real difficulties in railroad labor negotiations this year arise from two problems that are almost insoluble to the satisfaction of both parties:

 The nation's carriers, facing financial difficulties as a result of high costs and increasing competition in the transportation field, are revamping opcrations and seeking to trim higher manpower costs. This means shifting the work force for greater efficiency, as well as cutting it back.

 Railroad unions, worried by heavy job losses that have already come in the industry, are hoping to fight off further unemployment problems by seeking job-saving agreements (as on the Pennsylvania), or by resisting work rule changes that would climinate more jobs.

In some cases, the carriers are taking the offensive in the bargaining; in others, such as TWU's fight with the Pennsylvania, the unions are making the demands.

Most Significant—The most significant contest, both in size and scope, is
the current battle in which most of
the country's Class I railroads are engaged in the negotiations with the five
big operating rail unions—now that the
wage issues have been settled.

The carriers are demanding a change in long-established work rules that they estimate would mean a saving of \$500-million a year. The changes would eliminate some jobs—such as the firemen who now ride the diesel engines. They would also extend the duties of the current work force by adding to the mile-per-day runs, and to the assignments that train employees now handle.

The carriers claim the current work rules have long been outmoded by modern railroad equipment. The unions, rallying under the flag of job security, are hotly resisting these demands in negotiations that are just beginning to pick up steam.

**Adamant—On the question of job security, the TWU has been adamant in the Pennsylvania dispute. It estimates that some 9,000 of its members who were once employed on the Pennsylvania have been laid off for extended periods up to one year. On the job question, TWU and System Federation 152 fought not only the railroad but a third union—the Brotherhood of Maintenance of Way Employees. Some of the work sought by the two unions has been handled by the brotherhood.

By the time the dispute reached the showdown stage this week, it had gone through all available settlement processes—to mediators, then to a neutral referee, Francis Robertson, and finally, in June, to a three-man Presidential Board. And the TWU had rejected job security proposals made both by the referee and the board. In the final stages, Quill insisted that Pennsylvania Chimn. James M. Symes and Pres. A. J. Greenough join Newell in the negotiations.

In Labor

Cost of	Living:	What	's Happ	ening	to It
	Yotul	1947-49 = 100			
	Cost of Living	Food	Clothing	Housing	
				Total	Rent Only
July, 1952	114.1	116.3	105.3	114.4	117.9
July, 1953	114.7	113.8	104.4	117.8	123.8
July, 1954	115.2	114.6	104.0	119.0	128.5
July, 1955	114.7	112.1	103.2	119.9	130.4
July, 1956	117.0	114.8	105.3	121.8	133.2
July, 1957	120.8	117.4	106.5	125.5	135.2
July, 1958	123.9	121.7	106.7	127.7	137.8
July, 1959	124.9	119.4	107.5	129.0	139.6
August	124.8	118.3	108.0	129.3	139.8
September	125.2	118.3	109.0	129.7	140.0
October	125.5	118.4	109.4	130.1	140.4
November	125.6	117.9	109.4	130.4	140.5
December	125.5	117.8	109.2	130.4	140.8
January, 1960	125.4	117.6	107.9	130.7	140.9
February	125.6	117.4	108.4	131.2	141.0
March	125.7	117.7	108.8	131.3	141.2
April	126.2	119.5	108.9	131.4	141.4
May	126.3	119.7	108.9	131.2	141.4
Jone	126.5	120.3	108.9	131.3	141.6
July, 1960	126.6	120.6	109.1	131.3	141
Data: Dept. of Leb	or, Bureau of La	abor Statistics.			BUSINESS WEEK

C-of-L Index Hits New High in July, But It's the Smallest Rise Since 1954

The cost-of-living inched upward again in July, but despite a fifth straight monthly record high, the signs indicate a slowdown ahead.

The July figure, 126.6% of 1947-49 prices, showed a 0.1% climb from June—the smallest rise for that period since 1954. Bureau of Labor Statistics' Commissioner Ewan Clague expects food prices to fall over the next few months and says no threat of inflation is in sight now.

Despite the consecutive monthly increases, the rises were too small to affect the pay of nearly 1-million auto workers, which would have been adjusted with this price index.

New GE Offer to IUE Includes Wage Hike, Job Security Benefits

The General Electric Co. this week came up with a new three-year contract offer in negotiations with the International Union of Electrical Workers. It would provide for higher wages and job security benefits, but would eliminate the cost-of-living clause in current electrical contracts that expire Oct. 1.

In detail, GE's wage offer calls for a 3% hike next Oct. 2, and another 4% increase on Apr. 2, 1962, unless IUE leaders prefer a wage reopener—to renegotiate the second increase. No pay hike is called for next year. On job security, GE had two key proposals: a layoff payment of one week's pay for each year of service for employees with GE at least three years, and a retraining program for company-selected employees, who would be paid at 95% of their old rate while training for their new job.

New York Escapes Trucking Strike As Locals Beat Hoffa to Settlement

Threat of a citywide trucking strike in New York ended late last week when negotiators for three Teamster locals—282, 807, and 816—reached agreement with trucking companies on a 28¢ increase spread over two years. Teamster Pres. James R. Hoffa simultaneously sought new contracts for 50,000 truck drivers and 1,500 trucking firms in an area-wide agreement.

The three locals have resisted joining a Hoffa-led pattern settlement and apparently rushed settlement of their city contracts to avoid being part of an area-wide pattern agreement. Hoffa heads the Teamster negotiating team of 12 locals that seek new over-the-road contracts.

Kohler and UAW Are Still at Odds Despite Final Ruling of NLRB

The National Labor Relations Board last week ruled against Kohler Co. in its bitter six-year dispute with Local 833 of the United Auto Workers union. The fiveman board found Kohler guilty of indulging in unfair labor practices when, two months after the strike began in April, 1954, it granted an unlawful wage increase to its employees. The board ordered the company to reinstate all strikers not permanently replaced on June 1 of that year, except for 77 strikers who were fired for mass picketing and violence prior to the April wage offer.

In its decision, the board directed Kohler to begin bargaining with UAW. However, Kohler immediately appealed the decision to the U.S. Court of Appeals and the UAW, in turn, appealed the board ruling upholding the firing of those involved in mass picketing. With further court contests on the way, the Kohler dispute, already the nation's longest, is expected to continue for a long time.

A. O. Smith Workers Defeat UAW In Election UAW Tried to Sidestep

Last week the United Auto Workers got beaten in a local contest it never even wanted to enter.

UAW had sought to stay out of an election at A. O. Smith Corp. in Milwaukee, saying that it wanted to avoid stirring dissension in the local—Smith Steel Workers' Federal Labor Union No. 19806. It even obtained a court order removing its name from the ballot.

However, officers of the federal union, which opposed affiliation with UAW, went ahead with the vote. The ballot didn't name UAW but referred to "the international designated at the July meeting." Smith workers voted, 3,010 to 1,197, to continue the federal union as representative of production, maintenance, and office workers.

Earlier, UAW had defeated three other international unions for the chance to absorb the federal local, which is one of AFL-CIO's largest. Local officers said UAW tried to duck the showdown because it expected to lose.



1. Performs like a regular fork lift truck . . .



2. Stacks left 90° in narrow 6' aisles . . .



3. Stacks right 90° in same narrow aisles . . .



4. Drives loads into trailers and boxcars!

One truck ... one operator... does all this!

(Only the new Towmotor "Naro-Aisle-Stack" Truck can!)

- . Only truck of its kind for narrow 6-foot aisle stacking
- . One lift truck does the work 3 trucks usually do
- . Makes 36.5% of "lost" space usable in average plant

Amazing performance? You can't imagine what the "Naro-Aisle-Stack"lift truck will do until you actually see it . . .

See how it pivots loads a full 180° because it's equipped with hydraulic outriggers. See how it stacks materials left or right 90° and picks up loads from the same extreme angle. See how it also performs all other functions of regular fork lift trucks.

Most spectacular of all is the way it performs within the confines of narrow, six-foot aisles—enabling you to utilize storage space you considered "lost"!

Such unique operation is made possible only because "Naro-Aisle-Stack" trucks are equipped with *Towmotor Towmostatic Drive* — the only drive of its kind that eliminates clutch, transmission, drive line, differential and shifting mechanism.

Ask for booklet, "Captures Lost Space," describing the new series. Write Towmotor Corporation, Cleveland 10, Ohio.

New Naro-Aisle-Stack Trucks made only by ...



Man at work...

showing management how to get better protection lower cost



The A_M safety engineer's principal aim is to offer you safety counseling and advice which will help you prevent costly accidents. But as much as he is concerned with safety in your plant, he is also concerned with your production flow. He knows that these two objectives go hand in hand.

Our highly trained safety engineers and their staff specialists study your operations and suggest practical ways to prevent accidents—keep production up, bring insurance costs down. Of course no one—neither you nor we—can prevent every accident, but your A_M safety engineer has the know-

how to show you how to better your safety record.

Here is a typical case of the A_M "man at work" getting better protection at lower cost: A toymaker, acting on the advice of American Mutual safety engineers, reduced accidents 50%, cut insurance costs because American Mutual showed him how to control his accidents. Result: Better Protection, Lower Cost.

Why not look into improving your profit picture? Write American Mutual, Department BW-10, Wakefield, Mass.

Our business is protecting your business...better!



"The First American Liability Insurance Company" . . . a leading writer of Workmen's Compensation, all forms of Liability, Crime, Automobile, Group Accident and Health Insurance

PERSONAL BUSINESS

BUSINESS WEEK SEPT. 3, 1960



You may want to participate in the rough-and-tumble election campaign that picks up speed after Labor Day.

Both Republicans and Democrats, of course, are relying on an army of experts and party workers—plus unprecedented TV debates—to win votes. But they're also out to get volunteers to work at the local level.

As a business executive, you can play a special role. The campaigners this time are using business methods and sales techniques more than ever.

As a start, call your Republican or Democratic county headquarters, or citizens' groups of either party. They'll quickly give you an "assignment"—organizing, doorbell ringing, public speaking, or fund raising.

If you'd prefer not to identify yourself with either party as such, but would rather campaign just for Presidential and Vice-Presidential candidates, call either Volunteers for Nixon-Lodge or Citizens for Kennedy-Johnson. Hundreds of chapters are starting up—Nixon Volunteers in New Jersey, for example, plan clubs in the state's 567 municipalities, drawing on people who have never before worked in politics. (If you have trouble locating the headquarters you're after, phone "Information" or your election office; also watch for notices in your local newspapers.)

This month, parties are concentrating on getting voters registered. For instance, in New York State (45 electoral votes), 1.5-million independent voters are a special target for get-out-the-vote groups. You may be asked to canvass your neighborhood to persuade people to register. Understandably, you'll probably be sent to an area where the party expects most residents to vote its way.

Closer to November, the campaign will get tougher—and your work more diversified. You might join a speakers' bureau, or show a film to your club. Republicans have "Ambassador of Friendship" picturing Nixon on his foreign tours; Democrats have flip charts to help you debate issues before small groups. Nixon Volunteers provide a speech kit of do's and don'ts, plus comments on key issues.

Republicans may put you to work organizing a "Neighbors for Nixon" group—you'll get brochures, auto bumper strips, and campaign buttons to hand out. Democrats may ask your wife to play hostess for neighborhood kaffeeklatsches—the kind of get-together that Kennedy campaigners like to hold. They'll also need volunteers for the "Dollars for Democrats" drive.

Some organizations plan two-hour or one-day workshops to instruct volunteers in doorbell-phone campaign methods. One technique that will be used heavily: writing letters to friends and acquaintances urging their support of the party of your choice.

Some county headquarters have checklists for indicating what you want to do. A typical one: call 20 people a week; work in campaign headquarters one night a week; raise funds (perhaps through \$100-a-plate dinners); put up 20 campaign posters, etc. When one of the jobs you've volunteered for comes up, you get a call.

Both parties are collecting names of businessmen who have graduated from practical political courses, such as the ones introduced by the U.S. Chamber of Commerce. If you finished such a course, you may be asked to give a hand.

New York's election plans show how much party organizers will count 101

PERSONAL BUSINESS (Continued)

BUSINESS WEEK SEPT. 3, 1960 on businessmen for help. There, Democrats will stage symposiums of businessmen and politicians to discuss vital election topics. Republicans will have leaders in business and professional fields meet regularly with campaign directors. Another gimmick of the New York Republicans: Mr. and Mrs. Nixon and Lodge clubs—to encourage couples to campaign together.

Final job for volunteers will be poll-watching and serving as drivers in car pools to get voters to election booths on Nov. 8.

If you're tired of the crowded swimming pool at your beach or country club, you may want to build a backyard pool of your own—for next season. But remember, it may cost a lot.

Average price is slightly over \$4,000—and that's only for a small, 15-ft. by 30-ft. pool without extra equipment. For \$1,000, you can get a bare minimum in pools—maybe a vinyl type, mounted above ground, small in size and about 4 ft. deep. (It won't be the "standard" home pool that recent ads have claimed are available for about that price.)

Luxury pools cost from \$6,000 to \$10,000, with a 25-ft. by 50-ft. area, diving depth at one end, and the best concrete construction. It includes such accessories as filter equipment, diving board, and poolside walks, but not special features—pool heaters and covers, mechanical chlorinators, waterside dressing rooms.

Maintenance can be a big item, too. Chemical treatment of water costs \$20 to \$25 a month. A pool service company will charge \$40 to \$60 a month for cleaning the pool. Annual painting can run to between \$100 and \$200; closing-down and springtime reopening, \$75 to \$100 if you hire an expert.

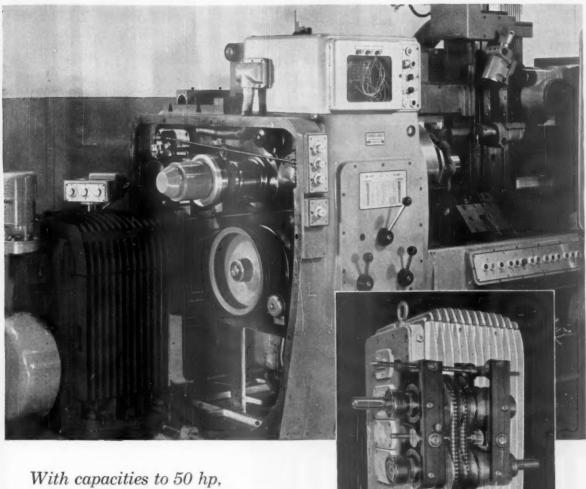
For your calendar: Sept. 15 is estimated-tax day. If you filed a declaration on or before Apr. 15, you have a quarterly installment due.

If you filed your declaration June 15, then your September installment is $\frac{1}{3}$ of the estimated tax for the year. And if you're filing a declaration for the first time this year, your accompanying payment should be half of the year's total. Caution: If payments fall below the required amount, you may face a penalty—6% of the difference between the amount paid and the amount due.

But note: If your estimated tax for 1960 was based on your taxable income or actual tax for 1959, then you'll escape penalty no matter how much your income this year exceeds your estimate.

Potpourri: The Complete Handyman, by Charles Hayward, is a simple, readable guide for do-it-yourself home repairs (Lippincott, \$5) . . . New York Life has announced that snorkel and scuba divers no longer have to pay an extra premium for insurance . . . Add a sophisticated comedy, Under the Yum Yum Tree, to your list of new Broadway shows (Henry Miller Theatre, 124 W. 43, top \$6.90, opening Nov. 16) . . . An investor's booklet, Capital Gains Through Option Selling, is clear, concise, gratis (Godnick & Son, 30 Broad St., New York 4) . . . North Carolina State College will hold its game hunting course this year at Southern Pines, Oct. 30-Nov. 4 (Box 5125, State College Sta., Raleigh, N. C., \$175).

Major advance in variable speed drives



With capacities to 50 hp, LINK-BELT RS P. I. V. drives offer compact, efficient, variable speed transmission with constant hp over entire speed range.

Link-Belt RS P.I.V. variable speed drives are designed and built to meet industry's demand for mechanical variable speed drives with higher horsepower capacity. This new RS P.I.V. drive provides smooth, precise, stepless speed control to meet the variable speed requirements of heavy machine tools and systems involving timing, mixing, and synchronizing. Capacities up to 50 hp with speed variation ratios up to 7 to 1.

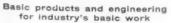
Link-Belt's RS P.I.V. is the most compact mechan-

ical variable speed drive available. So compact, in fact, that if your application requires it, the internal portion of the RS P.I.V. can be mounted directly into your housing or machine, saving you valuable floor space. All parts are metal, permitting effective splash-lubrication.

For complete information write LINK-BELT COMPANY, Dept. AV, Prudential Plaza, Chicago 1, Illinois.

15.442







BEARINGS



CHAINS AND



CONVEYING



POWER TRANSMISSION



(PROCESSING) EQUIPMENT

810 324 567 9 MR. MODERN CUSTOMER 810 324 567 9 MR. MODERN CUSTOMER

FARRINGTON EYE READS NUMBERS, WORDS, SYMBOLS, THEN TRANSLATES WHAT IT READS

The Farrington Optical Scanner (familiarly known as the EYE) is the first machine that does automatically what the human eye can do: it reads. Not only that; it also translates what it has read into language that is understood by data processing machines—punched cards, magnetic tape or perforated tape. And it accomplishes these feats with a speed and accuracy that no human eyes and fingers can match.

Take, for example, the credit card shown at the top of this page. The EYE reads the number, digit by digit. Then it punches

the number into the card for use in automatic accounting or billing systems; 10,000 cards like this can be processed per hour.

Optical scanning is the most advanced and most versatile means of converting imprinted data into any form for processing. Because the EYE sees, there is no need for special inks or paper. Almost any type face, character, arrangement or length of material is readable.

Wherever you find three or more key-punch operators, you find a likely place for an Optical Scanner. Only Farrington makes it.

Farrington Optical Scanners are now automating data processing for companies like:

AT&T NATIONAL BISCUIT COMPANY THE READER'S DIGEST MOBIL OIL COMPANY
For further information, write the Farrington Manufacturing Company, Needham Heights 94, Mass.

FARRINGTON®

TV Abroad Thrives on U.S. Ways

When it comes to creature comforts, U.S. families dwarf all the rest of the free world in ownership of autos, bathtubs, telephones. But in TV sets, other countries are gaining faster than the U.S., and will soon be ahead. By 1962 the number of families owning TV sets in the rest of the free world will shoot past the number owning them in the U.S.

The rate of growth has been rapid, indeed. As late as 1951, when there were well over 10-million sets in the U.S., there were fewer than 1-million in the rest of the free world.

While set ownership has increased at breakneck speed, foreign television has moved away from government supervision and government subsidization toward commercial operation. On both the sending end and the receiving end, television abroad is coming to look more like television in America.

 New networks, the usual carriers of commercial TV, are hooking up in Britain, Canada, Germany, Australia, France, and Italy.

 Governments are relaxing restrictions on programing and advertising

• U.S. broadcasting interests have been penetrating these inviting situations in whatever way permitted by local regulation: as advisers in France and Germany; as program purveyors in Britain, Canada, Japan; as minority owners of stations in Australia and

in a country that is prospering.

Britain, Japan, West Germany, and
Canada are the ranking countries in
terms of set ownership, with growth
especially rapid lately in Japan and Ger-

ence of a relatively affluent middle class

many. Since January, 1959, Japanese sets in use have tripled from 1.7-million to 5.5-million, German sets in use have doubled from 2.1-million to 4.2-mil-

 Commercial Growth—The bigger foreign TV gets, the more its resembles the American product. Unquestionably, increased programing, particularly of a less cultural, more commercial nature, has spurred set sales in these countries.

Japan's NHK government network serves a string of 51 stations; the commercially run networks serve a total of 54 stations. Germany's government network presents a lot of popular programs, including such U.S. products as Lassie and Father Knows Best. And German viewers will get a second, possibly even a third, network next January. In Britain, the commercial network ITA outpulls the government's BBC about two to one. And the British are considering establishing a third network in 1964.

In Canada the Diefenbaker administration has made a sharp break with the past policy of licensing only one channel to a city. It has granted nine new station licenses and will consider conditions for permitting a seven-station independent network that would compete with the government-sponsored CBC.

These situations contrast sharply with conditions in countries where TV is used as an organ of the government. Despite a full network of transmitting apparatus in France and in Italy, set ownership in each of these countries runs to only about 1-million. Government control seems to stultify programing and viewer interest. In France, for instance, over 20% of the program day consists of "news"—generally tedious reports on the activities of various government ministries. Controversial news subjects are not normally covered.

• U.S. Shows—Where TV operators are allowed to cater to the popular taste, programs run on about the same level as in the U.S. Indeed, U.S. programs, suitably dubbed for the local market, provided the bulk of the most popular fare on foreign stations. In Italy, Perry Como, Alfred Hitchcock, and Perry Mason draw top spots in numbers of viewers.

Japanese networks, restricted on the U.S. shows they can present, produce their own American-style Westerns on Japanese locations.

But most nations have erected barriers to the importing of U.S. programs—mainly to prevent dollar drains rather than to keep out American-style TV. In Britain, no more than 14% of the nation's presentations can be American-produced. In France, U.S. shows appear only in the 16% of the TV day reserved for films and children's programs. Japan imposes a dollar ceiling on the amount that can be paid for any U.S. show. This ceiling was recently raised to \$1,000 per program hour. However U.S. programs command an average of approximately \$3,000 per hour when secured on the open market.

• Ad Rules-Regulations on advertising run the scale from forbidding it



New networks are reaching new markets from Paris to Sydney.

entirely in France to permitting hardselling sponsorship in Japan. Government operation doesn't preclude advertising in most countries. On Italian TV, advertising is segregated into three time periods of commercials per day. These commercials tend to be excellent entertainment that hold the audience during the long commercial intervals. As on most foreign TV, the great bulk of the commercials advertise consumer softgoods.

German and English TV permit commercials scattered throughout most of the broadcast day. But these are spots, not sponsored shows. Theoretically, there is no preferential scheduling, each advertiser's spots following a rotation. Actually, the biggest adver-



Television abroad is getting to look more like TV in America.

Latin America; as network organizers in Central America and the Middle East,

• Forces for Expansion—What conditions breed this lush growth? Apparently, political stability and the exist-



Check List of other McGRAW-HILL business aids

INTRODUCTION TO LINEAR PROGRAMMING Explains the mathematical principles of linear programming and describes applications. By W. Garvis Standard Oil Co. of Calif. 375 pp., 74 illus., \$8.75

STATISTICAL COST ANALYSIS A comprehensive survey of statistical cost functions. By J. Johnston, Univ. of Manchester. 194 pp., 84 illus., \$6.75

AN INTRODUCTION TO MATHEMATICS FOR BUSINESS ANALYSIS. Shows how to use mathematical and statistical techniques to solve business problems. By R. Maier and S. Archer, Univ. of Wash. 275 pp., 85 illus., \$6.95

MANAGEMENT AND ORGANIZATION
How to improve the caliber of management and
organize best for profitable growth. By L. Allen, Pres.,
L. Allen Assoc. 364 pp., 34 illus., \$7.00

MANAGEMENT'S MISSION IN A NEW SOCIETY Inspiring new ideas in leadership to help your company prosper in the new business climate. Edited by D. Fenn, Jr., Harvard Grad. School of Bus. 345 pa. Sc. 000

STATISTICAL FORECASTING FOR INVENTORY CONTROL Shows how to forecast inventory needs with greater accuracy. By R. Brown, Arthur D. Little, Inc. 233 pp., 68 illus., \$7.75

COMPUTERS AND PEOPLE—Business Activity in the New World of Data Processing Fully explains the use of computers in business management. By J. Postley, The RAND Corp. 251 pp., \$6.00

10 DAYS' FREE EXAMINATION

McGraw-Hill Book Co., inc., Dept. BW-9-3
327 W. 41st St., N. Y. C. 36
Send me book (s) checked below for 10 days' examination on approval. In 10 days I will remit for book (s)
I keep, plus few cents for delivery costs, and return
unwanted hook (s) pochpaid. (We pay delivery costs
Dale—The Great Organizers, 35.25
Garrin—Intro. to Linear Programming, 38.75
Johnston—Stat. Cost Anal., 36.75
36.93
Alen—Mgant. Aission in New Society, 36.00
Brown—Stat. Ferceating for fay. Cent., 37.75
Postley—Comp. & People, 36.00
Name
Address
City. Zone., State.
Company
Position
Fer price and terms outside U. S.
write McGraw-Hill Intl., N.Y.C. 13W-9-3



Governments are relaxing restrictions on programing, advertising.

tisers frequently get the best times.

Advertising seems on the wane in Cuba, where the government is encroaching on broadcast operations. Half of the advertising agencies have gone out of business, and one top TV executive figured the "bourgeois vice" of advertising would disappear shortly. However, this is changing. The TV stations have been losing money; so the Castro government has authorized a "Planification Board" to assign obliga-

 U.S. Network Operations—American broadcasters are generally treated like Yankee peddlers overseas. Yet, despite restrictions on importing American programs, most of the big syndicators distribute U.S.-produced films wherever there is a local TV operation of any importance.

tory quotas of advertising to compan-

Lately, the U.S. networks have stepped up their activities abroad. This could become an important field for them. They are barred from owning more than five VHF stations in the U.S., and there aren't very many untapped domestic markets that readily can be added to their station line-ups.

The U.S. nets have taken two expansion routes abroad. CBS and NBC have concentrated on the more industrialized nations. In these countries they are generally barred from direct ownership interest in stations, so they operate as broadcast advisers. In some countries they have signed exclusive licensing agreements covering whatever amount of American programs may be imported.

To get over the import barriers, CBS has established joint ventures in



The Globe-Werniche Co. • Cincinnati 12, Q

ing, sturdy aluminum frame assure comfort

and service. See your G/W

dealer or write Dept. A-9

First Call For PAPERWORK
HELP!

BRUNING

WOLL YOUR BRUNING MAN



the nicest things happen to people who carry FIRST NATIONAL CITY BANK TRAVELERS CHECKS



You advertise in Business Week when you want to influence management men.

fewer farmers, yes ...BUT INCREASED SPENDABLE



MEET Farmer Herbert Werstler of Creston, Ohio. He grossed more than \$20,000 in 1959. He's typical of the new-type farmer in Ohio — young, alert, sharp with figures.

As farming reaches new levels of efficiency, capital needs increase. Those who don't measure up sell out and are replaced by others like Herb Werstler . . . farmers who have purchasing power undreamed of only a few years ago.

Ohio farmers now have a yearly spendable income of \$1,277,100,000 - making Ohio "top third" in farm income among all 50 states.

You can reach these "top third" Ohio farmers most effectively with THE OHIO FARMER, where articles are edited for their own crops, their own soil, their own state. Ohio farmers prefer their own state farm paper 2 to 1 over any other farm publication.

Your ads in THE OHIO FARMER have the support of local editing. Want proof? Send for free folder.

The Ohio Farmer CLEVELAND 14, OHIO



STRAIGHT-LINE ADVERTISING available also in MICHIGAN FARMER • PENNSYLVANIA FARMER
THE INDIANA FARMER • THE KENTUCKY FARMER THE TENNESSEE FARMER & HOMEMAKER



U.S. broadcasters are moving into foreign operations.

several countries to produce programs for local and other export markets. Frequently, these programs use the same scripts or formats as their U.S. counterparts.

ABC prefers the station ownership route. It has acquired a considerable interest in Australian TV properties. It owns strong minority interests in TV stations in five Central American countries, and in Venezuela and Lebanon. And it is considering starting pioneer stations in countries that don't have TV. All of these operations are set up as present or potential networks; ABC acts as a supplier of programing, as sales representative, and provides broadcasting management for each station

· Special Case-Canada probably experiences the most concentrated form of U.S. competition. Most of its densest population belt lies within range of signals from U.S. stations. With no language barrier except in French Canada, several U.S. stations draw the greater part of their audiences in Can-

Some New York advertising agencies have classified their TV commercials from Buffalo stations as Canadian advertising-Buffalo signals reach into the heart of the Toronto market. Other U.S. stations penetrate the market areas around Vancouver, Winnipeg, Kingston, Hamilton, Windsor, even Montreal.

Canadian station operators object particularly to a regulation that stipulates that after April, 1962, less than half can be U.S. produced. Audience figures indicate that Canadian viewers prefer the better-financed U.S. productions. END

you make either of these

HANDY & HARMAN CAN HELP YOU

These products contain precious metal, in both cases silver. Precious metalsgold, silver, platinum, and their alloys are Handy & Harman's business. They play a tremendous role throughout industry. In refrigeration, heating, electronics, aircraft, automotive and in the manufacture of hundreds of products, parts and components.

Our experience with precious metals has been amassed over 93 years of doing business. Through research and manufacturing we have put these metals to work in ways profitable for designers, manufacturers, fabricators and processors in all kinds of industries.

Of course, if you manufacture holloware or missiles, you know about us. Our intent is to offer assistance to those who don't know how really "precious" a precious metal can be. Your inquiries, on anything having to do with the role of these metals in industry, are most welcome. Handy & Harman, 82 Fulton St., Dept. BW, N.Y.C. 38.

Your No. 1 Source of Supply and Authority on Precious Metals



General Offices: 82 Fulton Street, New York 38, New York

IN THE PITT-AMSTAN MARKETING GAME

The Player Deals With Individual Customers EACH PLAYER REPRESENTS A WHOLESALER



he:

- 1 A list of the 300 customers, with each one's credit limit and an estimate of his annual purchases
- 2 A list of his own salesmen, and what each is like
- 3 Data on what each salesman did last month and what each of his customers bought.
- 1 Can change his price and inventory on three of his product groups
- 2 Assigns salesmen to call on particular customers
- 3 Allocates sales and managerial time to administration, credit problems, training
- 4 Can hire and fire employees

He - and his competitors - feed decisions into

@BUSINESS WEEK

Here's a Realistic Way to Play

In the three years since the American Management Assn. set off the business game fad, thousands of businessmen have piloted imaginary companies through competitive battles for imaginary markets. And skeptics have gone right on asking just what you can learn about business by playing games.

Now the Amstan Supply Div. of American Radiator & Standard Sanitary Corp. has come up with a novel answer and a novel game—one that aims to teach a practical lesson. With the marketing exercise partially illustrated above, Amstan hopes to teach its sales managers how to sell plumbing and heating supplies more profitably.

Specifically, Amstan wants to show the managers of its 63 branches how to pick the best customer mix—meaning the customers they sell to and the way they divide their sales effort among them. That's the key element in the wholesaling outfit's current drive to better its profit margins.

The Amstan game is a "micro-market simulation," according to Amstan business research manager R. C. Frazee. That means it is tailored to Amstan's own markets, and particularly to Amstan's own customers. Built into the

game are some 300 "typical" Amstan customers, in effect playing against the

The result is a game so true to Amstan's own life that Frazee is even planning to use it to help solve some of the division's marketing strategy problems. That's why Amstan Pres. Robert Sells thinks the game can teach his branch managers not general business principles but exactly how to run their branches the way he wants them run. • Broad Picture-Most business games have much less specific goals. Typically, they round up a group of players and put them to work making pricing and investment decisions for fictitious "companies" competing for sales in the same or overlapping markets. An electronic computer or other umpire decides what total sales volume will be, divides up the market on the basis of each company's price, advertising expenditure, selling ability, and the like, then reports back on profits. From this experience, the players are supposed to get the broad picture of what business

is all about.

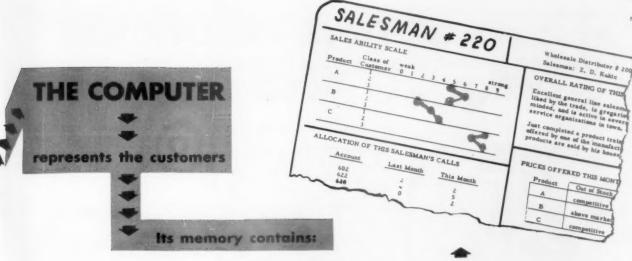
There are, of course, a lot of variations. There are games about marketing that concentrate on allocating sales

effort, such as the marketing exercises of Pillsbury Co. and Remington Rand Div. of Sperry Rand Corp., and there are games for specific industries—Kroger Co.'s supermarket game, Dayco Corp.'s tire dealer game, oil company service station games, and so on.

But all of these are what Frazee calls "macro-market" games. They deal with generalized mass markets rather than industrial customers.

• Individualized—In the Amstan game, the customer is treated as an individual. Each one has his own buying patterns and his own supplier preferences; there's even a customer who buys only from his brother-in-law. These customer profiles, based on an analysis of some 1,200 actual and potential Amstan customers, are programed into the computer. For each customer the computer runs through a separate calculation to decide how much he will buy and from whom.

That makes a lot of work for both player and computer. The player also has a list of all the customers and all his own salesmen, with quite a bit of data about them (though not so much as the computer has). He has to make separate decisions about salesmen's time



1 Data on all players' salesmen, like this

2 Data on the quirks and buying habits of each customer, like this



With this background information, it computes

THE RESULTS

From the characteristics of each customer, and of the salesman who called on him, and the deal he was offered — plus an element of chance —

The computer calculates:

- 1 How much each customer bought
- 2 From whom
- 3 At what price

After collecting these results, it prints out each distributor's profit and loss statement, sales summary, credit and inventory reports, and a report on each salesman's performance like this:

SALESMAN	ACCOUNT	PURCHASES OR SALES	GROSS PROFIT	CALLS	MARKETING INTELLIGENCE
#220	725	\$12,497	\$1,837	18	Severe product complaint
220	726	10,625	1,530	15	Retiring - no sons
220	727	8,742	1,276	10	
220	728 -	15,968	2.283	20	

Wholesaler

EEK

nd

TC

ger

.'s

ce

lls

th

an

ne

al.

rns

nly

us-

of

ım-

the

m-

ıla-

VIIC

oth

ilso

all

of

ich

ake

me

960

and other aspects of sales effort for each customer. In game sessions so far, the players have taken about five hours to make their initial decisions.

An IBM 650 computer needs about an hour and a half to reproduce the 300 customers' decision-making processes and figure out how much they will buy and from whom; once that is done, profit-and-loss statements for the players, and reports on salesmen's efficiency, can be calculated in a few minutes. In the ordinary management game, a computer of the same size can do the whole scorekeeping job in a matter of minutes.

Amstan and the University of Pittsburgh are now busy reprograming the game for an IBM 7070 that the university will be getting in the fall. The giant computer will do all the calculations in about 10 minutes, and it will also take over a lot of the players' routine work.

• Double Problem—Even so, many management development specialists think Amstan's game is too complicated and cumbersome for a training program. Amstan's executives don't agree. Amstan's game took the form it has because the division was facing two closely



"Should I lease only trucks or get cars and MHE off my hands too?"

Truck leasing ends truck maintenance problems. But will other motorized units remain to plague you? Ryder wraps up trucks, cars, materials handling in one lease package. Frees you of service worries on all three; frees capital tied up in all three. Ryder provides you with the latest Ford trucks and cars or other dependable makes. And you enjoy . . .

RYDER'S EXCLUSIVE PACKAGE OF LEASING EXTRAS:

- Get the exact trucks for the job
 Get more out of your trucks Your Ryderman expertly designs your fleet to meet your specific transportation needs.
- . Enjoy uniform quality of service Largest number of wholly-owned service locations in the business guarantees the most experienced, uniform truck service everywhere.

Ryder's continual preventive maintenance keeps your trucks at top performance levels.

Safety Program

A planned, nationwide safety program designed to help you reduce accidents, improve your customer and public relations.

Decide now to see your nearby Ryderman, or write for our booklet "Design for Profit" to:

RYDER TRUCK RENTAL INC.



P.O. Box 33-816 Dept. 02 Miami, Florida

Ryder System also operates truck lines in 10 states and tank lines in 26 states. related problems at the same time—one of marketing profitability, and one of management development.

Since World War II, as Amstan's vice-president of field operations, C. Gilmore Ruston, points out, growing competition, and the collapse of prices in economic slumps, have combined to pinch profit margins in the heating and

plumbing supply business.

And Amstan has no competitive advantage on product line. Though it's the wholesale supply division of American-Standard, its franchise is not exclusive for its parent's plumbing and heating supply equipment. In Pittsburgh, Amstan's headquarters city, American-Standard has four other wholesale outlets; in Chicago it has 20 others.

Besides, two-thirds of Amstan's sales are of related "roughing-in" items (such as steel pipe, soil pipe, fittings) the parent company doesn't make.

In this situation, Vice-Pres. Ruston thinks, the only way Amstan can increase its profitability is to improve its

customer mix.

• Finding the Customers—After a careful look at its profit margins, Amstan has decided the branches are "either doing business with too few people or not calling on the right type of accounts." So, says Ruston, the division got to work "to get the customer brought to light—who he is, where he is, and why we weren't selling him." Then each branch manager could figure out "how to rearrange his sales efforts to get the best mix to assure profitability."

That is the goal of Amstan's current "account census" program—a market research and analysis project aimed at pinpointing the customers who will produce the most profitable business. The branch managers will have to do the final job, and the game is supposed

to show them how.

 Market Studies—Three members of Amstan's headquarters research staff did a pilot market study for one branch in 1958. They dug up present and potential accounts (contractors and factories). They interviewed customers

and branch employees.

, or

to:

INC.

816

da

nes

tes.

Then they made out a sales card for each account—its market (residential, commercial, industrial), buying potential, credit rating, five-year buying history with the branch (if any), and the branch's past efforts to sell it. They also recorded a lot of information on each customer's buying attitudes—whether he bought on price alone, how much he was influenced by salesmanship, special services, and the like.

Later, other branches did their own account censuses, though most gathered

only basic quantitative data.

• Using the Data-With the market research done, "We really knew for the first time," says Vice-Pres. Ruston, "who our customers were, the type of business, and what their potential was so we could make decisions on how best to get the business." The next step was, of course, to get the right people to make the right use of it. That's where the game came in.

Business research manager Frazee originally was attracted to games for management training when he read about the American Management Assn.'s top management decision simulation (BW–Jul.25'59,p56). Amstanhad been concerned about a lack of depth in management and Pres. Sells had launched an effort to develop new talent and beef up the old.

But there's a lot to teach a wholesale manager. "There are so many little details about running our business," says Sells. "They get a new manager

confused."

• Starting a Game—Frazee thought a game might provide synthetic experience. Sells recounts that Frazee said one day, "I don't suppose you'd like to play this game they have at Pitt." This was a highly abstract general management game. "It was fun," Sells admits, "but I wanted a game that specialized in our business."

So Frazee and Dr. William Kehl, director of the University of Pittsburgh's computation and data processing center, worked out the Pitt-Amstan Market

Simulator.

Except for the customer decision-making process (based on the Amstan account census), it's much like any other marketing game. Six competing distributors are selling three product lines to 300 potential customers. Each distributor has six salesmen of varying abilities (which can be improved by training) and other workers. He can hire and fire. He sets prices and terms of sale; spends money on salaries and inventory; allocates time,

Each distributor has basic financial information about customers and descriptive reports of his salesmen's talcents; after each round of play he gets financial statements from the computer. From time to time he gets other facts. The Builders Exchange Newsletter (signed by Ima Builder) tells him what contractors are bidding on which jobs. Occasionally the computer provides such tips as "Customer 801 normally employed two office girls, just released one."

Without the profile of Amstan's own market, Frazee thinks, this game could apply to any marketing organization. In fact, an auto manufacturer is thinking of adapting it for dealers.

 Controversial—The Amstan market model is the game's unique—and controversial—feature. Some game designers think it's much too detailed.

Frazee disagrees. Most training

CANADA YOU CAN LEASE

FROM RYDER



TRUCKS



MATERIALS HANDLING EQUIPMENT

and enjoy . . .

- Full service through Ryder whollyowned service locations.
- Use of equipment especially designed for your needs.
- The benefits of having cash for this equipment available for more important jobs.
- One accurate, easy-to-budget cost you can project.

Decide now to discuss your truck leasing as well as car and materials handling equipment leasing with your nearby Ryder Canadian Office.



RYDER TRUCK RENTAL

(CANADA) LTD.

350 Kipling, Toronto • 1815 Bank St., Ottawa

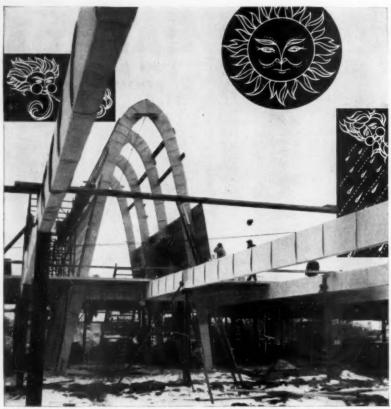


photo courtesy of Thilmany Pulp & Paper Co., Kaukauna, Wisconsin

ACRI-FLO 151 helps wrap out the weather

For years paper manufacturers have searched for an economical, non-staining protective kraft that would wrap out the weather. Now that search has ended! With Acri-flo 151 it is possible to produce such a wrap... a high-impact, duplex kraft from less costly sheets. This is only one of the many ways Acri-flo has helped the paper industry produce better products at lower cost. A letter from you today will bring you proof of how Acri-flo can help improve your paper products!

ACRI-FLO offers: Easy processing Excellent UV heat-light stability Ideal top coat Creating Progress Through Chemistry



THE GENERAL TIRE & RUBBER COMPANY Chemical Division · Akron, Ohio

Chemicals for the rubber, paint, paper, textile, plastics and other industries: GENTRO SBR rubber GENTRO-JET black masterbatch • GEN-FLO styrene-butadiene latices • GEN-TAC vinyl pyridine latex • GENTHANE polyurethane elastomer • ACRI-FLO styrene-acrylic latices • VYGEN PVC resins and compounds • KURE-BLEND TNTD masterbatch • KO-BLEND insoluble sulfur masterbatch

games, he says, teach by analogy; the player gets a general idea that he is supposed to apply to his own similar problems. But Amstan's branch managers are supposed to be able to make a literal transfer from game to job.

 Applying the Lesson-Right now, what they are supposed to have learned (at meetings last winter) is how to balance the cost of serving a customer against revenue he can bring in.

Branches began applying the lesson in April, and some managers are already reshuffling their salesmen. It's too early to see any concrete payoff. But branch managers were enthusiastic, and Executive Vice-Pres. Joseph Salamone is sure they'll come up with a better customer mix eventually.

• More to Come—There's more to customer mix, of course, than just sales cost vs. revenue. Amstan wants its branch managers to learn how to balance their accounts geographically, by size, and among industries. It wants them to give a lot of attention to customers' credit standing ("The worst thing in our business," according to Sells).

That will come up early next year, and the branch managers will learn their lesson by playing the game

• Other Uses—Meanwhile, Amstan is finding other uses for the game. It has been trying out candidates for branch managerships by letting them play, through the mail. Some are now on the waiting list for such jobs; others are getting additional training.

Amstan's executives, while not calling the game a selection device, admit it influences them, giving "an insight into a man's thinking abilities."

Amstan has also been using the game to give divisional staff personnel and executives of other American Standard divisions a better idea of branch managers' problems.

The most ambitious application is scheduled this fall. In one of its big markets, Amstan has a price-cutting problem. Frazee wants to test alternate pricing strategies, using actual rather than typical customers. Amstan executives well acquainted with competitors will play their roles.

• The Way It Is—Amstan's advisers at Pitt regard the game as a "major breakthrough in being able automatically to generate computer simulations of micro-models of large business sys-

But is the game actually realistic enough to be a basis for decision-making? Frazee is convinced it is, though the only proof so far is the reaction of the 100 or so Amstan people who have played it. All of them, he says, have echoed Pres. Sells' remark: "This is just the way our business is." END

Take it wherever the work is!

New RECORDAK Portable Microfilmer is easy to carry from desk to desk...office to office...city to city!



ie

as.

h

re

it ht ic rd rd 11-

ig ng te er 11-DIS

or ti-

115

VS-

tic ık-

gh

of

ive ive ONLY 24 LBS. That's all this wonderfully capable microfilmer weighs. Actually, less than most office typewriters!

The new RECORDAK Portable is simple for anyone to operate. Just plug it in . . . feed documents into it-and they're photographed and returned in sequence! Many surprising features-two rolls of film, for example, can be exposed simultaneously.

Now even the smallest concerns-even the one-man office-can enjoy the short cuts and the protection which microfilming alone provides. And larger companies, too, can use this new microfilmer as an adjunct to their high-speed Recordak microfilmers . . . or use several RECORDAK Portables in decentralized operations.



Travels in style in optional carrying case



MAIL COUPON TODAY



(Subsidiary of Eastman Kodak Company) originator of modern microfilmingnow in its 33rd year

IN CANADA, contact Recordak of Canada Ltd., Toronto

RECORDAK CORPORATION

415 Madison Avenue, New York 17, N. Y.

Gentlemen: Send free booklet giving details on new RECORDAK Portable Microfilmer.



Personal Control Works for Friden

The man who wears the No. 1 badge at office appliance plant is Pres. Walter Johnson, a vigorous old-timer who makes a ritual of touring his plant and knowing his employees.

The vanishing breed of rugged individualist in industry will never be extinct as long as Walter S. Johnson draws a breath. Johnson is the septuagenarian president and chairman of Friden, Inc., California-based creator of powered office appliances.

Johnson and the company he has prodded into a forward position in the automatic business machines indus-

try are a study in contrasts.

Friden (pronounced free-den) is a bustling, sales-oriented outfit. It had to be to survive 27 years of sometimes notoriously cutthroat competition. The company started with a desk calculator, now offers a line that ranges from a simple adding machine to a sophisticated array of integrated data processing hardware. As an innovator of machines to speed paper work and reduce human error, Friden is as modern as they

· Non-Organization Man-Its chief executive, on the other hand, is unswerving in his devotion to a philoso-phy of business management that has the nostalgic flavor of an era long past.

If you could prowl through the right desks at Friden's headquarters in San Leandro, across the bay from San Francisco, you might find something approximating an organization chart, Johnson concedes. But nobody hauls it out where the president can see it. To Johnson, an organization chart with its neat boxes and connecting lines is ana-

"Put a man in a square and you limit him," he says. "I want to get the whole benefit of his thinking on everything. If I circumscribe him too much, I may never know how good

Johnson is backed up by the usual complement of functional executives,

each with his own area of responsibility. It isn't hard to visualize them in the familiar blocks of an organization chart. It's the connecting lines that fog this mental image. Any true chart of the Friden company would show a forest of lines radiating from Walter Johnson's little "square" at the top, one line to each of the company's 3,900

· Direct Communication-When Johnson wants action, he doesn't often wait for the chain of command to get it for him. He leapfrogs as many supervisory echelons as necessary to get to the seat of the problem. The communication line works the other way

The company president who boasts

that his door is always open to employees is a step behind Johnson. The Friden president doesn't wait for the employees to knock at his door. Twice



POLICY HUDDLE always follows Johnson's biweekly plant tours. Across desk from him are Robert E. Busher, Philip R. Samwell, Charles R. Ogsbury.



HELPFUL suggestion is made by Johnson to assembler. Although not an engineer, Johnson has knack for spotting inefficient methods.



a week he visits them—or at least the 2,700 of them who populate the sprawling headquarters plant in San Leandro. (Friden has smaller factories in Rochester, N. Y., Lewistown, Pa., and Wageningen, Holland, this one soon to be replaced by a new plant at nearby Nijmegen.)

For its convenience to the business community, Johnson keeps an office in San Francisco with a company he helped organize 50 years ago and now serves as board chairman. But he spends every Monday and Friday at the Friden plant, touring the factory floor in the morning and huddling with his executive committee in the afternoon.

This regimen would be no mean feat for a man 20 years younger. The plant covers 459,000 sq. ft., and even at a brisk pace the tour occupies the better part of a morning. Johnson, who will be 76 in November, makes it seem a breeze.

• Peripatetic President—In a recent observance of this ritual, a BUSINESS WEEK reporter - photographer team trailed along. Johnson threaded his way through every bay, every aisle, digressing now and then to slip through the lines of benches that flank the aisles. Again and again he paused to relate or hear a fragment of small talk, to question an employee about his work or his family, to note a subtle change in assembly or fabricating procedure, and occasionally to find out why a small change that he suggested last month hadn't been adopted.

Most people had a cheery greeting for him. Some twitted him about his recent "business" trip to Tahiti and Hawaii in which he mixed a little pleasure and some solemn family business. A few glowered as though distrustful of the camaraderie.

It wasn't a typical day. It was the first day after a two-week vacation shutdown, and the women employees were bubbling with vacation memories that they had no hesitation about sharing with the president.

· Birthday Kiss-Johnson landed in the motor assembly department during a coffee break. One girl was opening a beribboned birthday package, and Johnson bestowed a ceremonial kiss to make it official. A dozen or more women were draped in floral leis, mementoes of Hawaii vacations. Before Johnson could protest-and it's highly debatable whether he would have anyway-he had a lei around his neck and a betraying smear of red on his lips. Clearly there was no static in the line of communication between the factory floor and the executive suite-for that fleeting moment at least.

In the tool and diemaking department, Johnson stopped to chat with a man who was excited about an invention he thought should interest Friden but had been rejected by the factory manager. Johnson promised to come out to his house and look at it.

• One Horse Owner to Another—A slim girl in Capri pants and pony tail stopped the president to tell him she had bought a horse—a sure conversation piece with weekend rancher Johnson. On her workbench she spread out a collection of photographs of the animal with the proud owner astride him and dangling her legs around his helly.

"He doesn't stand very high," Johnson said.

"Fourteen hands," she protested.
"Well, either he needs a shorter rider
or you need a taller saddle," he quipped.
"Why don't you bring him out to the
ranch some day for a ride?"

The girl promised that she would.
• Pointed Question—On the calculator assembly line, Johnson broke up in laughter when a young Chinese-American buttonholed him to ask the question that Wall St. at that time had been asking with more and more persistence:

"When are you going to split the stock?"

Recurrent rumors of impending mergers along with a 94% jump in first-half earnings had been ballooning the market price of Friden stock on the Pacific Coast Stock Exchange. It had reached \$121 on the day the question was asked.

Johnson was noncommittal. He conceded that at a high price there was no chance of achieving the breadth of distribution that would qualify the stock for listing on the New York Stock Exchange (there are about 2,500 stockholders). But in the next breath he added that he didn't want to see the stock buffeted by the winds of speculative trading, surely one of the hazards of a low price. Johnson makes no secret of his conservatism.

Since this encounter, however, the stock has split 3 for 1.

• Philanthropist—In the San Francisco area, his home for more than half a century, Walter Samuel Johnson is something of an enigma. Although he is a director of the Federal Reserve Bank of San Francisco and heads two major corporations (Friden and American Forest Products Corp.), he doesn't move around in the social and business circles that would stamp him publicly as a man of wealth.

San Franciscans were stunned a year ago when he gave the city \$2-million, largely in Friden stock, after the voters refused to match state funds in that amount for rehabilitation of the Palace of Fine Arts, a crumbling old architectural masterpiece built for the Panama-Pacific Exposition in 1915.

Johnson and his attorney pondered that gift for months. He and his sec-

23 E. JACKSON BLVB., SUITE: B-9,

CHICAGO 4. ILI



d

e

e

is

1-

er

d.

ne

d.

OF

in

e-

he

ne

re

he

et-

sthe

he

ad

on

n-

vas

of

he ock

ck-

he

the

ıla-

rds

no

the

fa

he

erve

two

eri-

sn't

ress

icly

year

ion,

ters

that

lace

chi-

the

ered

sec-

1960

DRIVING ENERGY of Walter Johnson is behind Friden's expansion into company offering wide array of office machines.

ond wife were in a divorce suit, and he feared the philanthropy would be misconstrued as a "snow job" to divert public attention from the divorce. In the end, his affection for the architectural handiwork of the late Bernard Maybeck outweighed his apprehensions, and if San Franciscans have any doubts about his motive they're keeping them quiet. Right now, Walter Johnson is very big in San Francisco.

An interesting footnote to the gift: The city unloaded the Friden stock at \$64 a share. Since then the stock has paid one stock and two cash dividends

and jumped 90% in value. · Early Careers-A native of Saginaw, Mich., where he was known as Sam Johnson (he later transposed his given

names), the Friden president exhausted the possibilities of two careers before he took a law degree at University of California. He had been circulation manager of the late Fremont Older's old San Francisco Bulletin and had owned a

bookstore.

During his brief career at the bar, interrupted by World War I, one of his earliest projects was to incorporate the Stockton Box Co., in which he obtained a small ownership position. This company, which was Johnson's introduction to the lumber business, became the nucleus for American Forest Products Corp. Under Johnson's chairmanship, last year it returned \$2.8-million after taxes on \$88-million sales.

When you look back over 75 years of a busy man's life, it's possible to isolate some of the events that shaped his career. In Johnson's case, it's pretty clear that his war service had a pro-

found influence.

• Fight Against the "Wobblies"-In the Pacific Northwest, the rag-tag, leftwing labor movement known as the Industrial Workers of the World (the 'Wobblies") was creating strike havoc in the forests. The fledgling Army Air Corps felt the pressure of this disturbance because it slowed up the harvesting of 40-ft. straight-grain Sitka spruce for airplane wing beams. As an Army shavetail, Johnson was dispatched to the woods near Aberdeen, Wash., to counter the IWW's influence on the woodsmen. He organized the Loval Legion of Loggers & Lumbermen in opposition to the Wobblies, and recalls that he signed up 8,700 loggers in six months.

Returned to civilian life, he addressed himself to the fortunes of the Stockton Box Co. and allied activities, all of them now wrapped up in the prosperous American Forest Products Corp.

· Depression Venture-In the melancholy years that followed the 1929 collapse of the stock market, there weren't many investors who would, or could, lend a sympathetic ear to Carl M. Friden, a Swedish immigrant who came to the U.S. by way of Australia. Friden's inventive and engineering talent enabled him to amass a fortune just in time to see it flushed down the drain by the market crash.

Carl Friden had split with the Marchant Calculating Machine Co., which is now the Marchant Div. of Smith-Corona Marchant, Inc., and was determined to recoup his fortunes with a new calculator that wouldn't infringe the patents he had assigned to Marchant. Friden was not only broke but owed thousands of dollars in back wages to the handful of workers who had helped him with the new machine.

The inventor offered Johnson a half interest in the Friden Calculating Machine Co. for \$25,000. Johnson and three of his associates at American Forest Products each put in \$6,250 and got half the common shares in return. Later the same group was tapped for \$88,000, and they accepted preferred stock which was redeemed 10 years

• Profitable Investment-The original common stock was split again and again and the outstanding shares have multiplied through stock dividends. But no new stock has been offered for public sale. Except for shares issued to effect two mergers, Friden has financed its growth with internally generated funds.

Johnson's \$6,250 investment in 1933, after deducting his \$2-million gift to the city, has a current market value around

· Oldster at Helm-In the persistent debate over compulsory retirement at 65. Walter Johnson stands as an annoying challenge. When Carl Friden died in 1945, Johnson became president and inaugurated the energetic routine, since become ritual, that belied his 61 years. Friden wasn't a sick company, but by the postwar standards that put a premium on professional management, it clearly needed an infusion of youthful blood to invigorate it for the lively battle at the market-place. Instead of youthful blood, it got Johnson.

To stay afloat during the war when the scarcity of metals limited production of calculators to 25 a day, Friden had shifted into war work-generators, tachometers, driftmeters, small caliber artillery shells. A backlog of orders for 16,000 calculators took up the immediate slack caused by cancellation of munitions contracts, but it didn't take the plant long to boost production to 250 calculators a day and the backlog melted

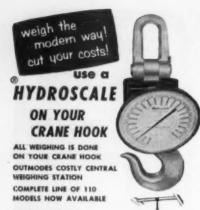
 Product Search—Johnson kicked off a search for new products that hasn't ended since. First came an adding machine with a new twist. Then Friden married its calculator to an electric typewriter in a device that hit the market as a Computyper, the company's first stride toward integration of data processing.

The electric typewriter was a specialized product of Commercial Controls Corp. called the Flexowriter in which a punched paper tape is produced simultaneously with the typewritten material. In turn, the perforated tape may be used to actuate other machines.

Johnson became so enchanted with the compatibility of the Commercial Controls product line and his calculator that Friden acquired the Rochester (N. Y.) company in 1956 for \$7.3-million in stock. Since then, Friden's engineers have hitched the calculator and Flexowriter to a string of other components-card and tape punches, data collectors, tape transmitters, and readers. They even wedded a tape punch to the adding machine to integrate this most basic of all office calculating machines with the data processing system.

 Integrated Systems-In Johnson's view today, Friden's most glittering sales prospects lie in its integrated data processing systems and their multiple components and accessories. He has about 450 salesmen at work exclusively on systems sales as compared with about 550 on the calculator catalog, which now includes a machine that extracts a square root at the touch of a key. Oddly enough, although calculators are the core and the backbone of Friden, they now rank third in Johnson's estimate of growth potential. That's because Johnson, at 75, plunged the company into a brand new venture, postal supply and mail room equipment.

· Competitive Challenge-Commercial Controls had developed a postage meter that ran into rough sledding against the popular and heavily promoted Pitney-Bowes line. Last year Friden bought International Postal Supply Co. of New York, which makes a line of postage



TYPICAL WEIGHING **APPLICATIONS**

Just a few of the many applications include—loading, unloading, batching, check weighing, foundry charging, production control, process control, checking inventory, and, protecting your equipment from overloading.



HYDROSCALES guaranteed-

to be free of defects in workmanship and materials, and accurate to ½ of 1% of the maximum dial capacity.

Write for descriptive literature explaining model features.

HYDROWAY SCALES, INC.

31312 Stephenson Hwy. Royal Oak, Mich.

"The world's largest producer of crane scales"



TRANSICORDER MINIATURE ALL-TRANSISTOR TAPE RECORDER

It's here! A rugged, new, camera-size precision tape recorder that lets you record and play back anywhere-any time-as easily as taking pictures! Weighs only 4-lbs! Carry in your briefcase or over your shoulder. Standard reel permits full hour's taping. Concertone's Transicorder is truly a quality, miniature tape recorder with amazing sound fidelity and big tape recorder features.

Only \$199⁵ Complete with batteries, microphone and earphone

One knob control...built-in speaker. Adapts to AC...phone pickup adapter...car lighter plug-in. For full description please mail coupon today

Division of Astro 9449 W. Jefferso Please send full	a Blyd Dept. BW	TONE INC. Culver City, Calif. he TRANSICORDER
Name		
Address		
CITY	Zone	State

canceling machines, check endorsers and signers, multiple-channel conveyor systems, and related equipment. Under Friden ownership, the International Postal Supply division last month won a \$3-million contract to supply the Post Office Dept. with 59,000 money order machines

Friden engineers are at work on a new postage meter that Johnson hopes will be ready for the market late this year. Younger men might shrink from locking horns with Pitney-Bowes, undisputed boss of postage meters. But Johnson, 10 years past normal retirement, is looking forward to it. In fact, he pins his optimism for the mail room equipment division largely on the new meter.

• Earnings Picture-Friden has come a long way under Johnson. With other industry it has shared the problem of shrinking profit margins on growing sales volume, but its per-share earnings have been fairly stable (\$3.44 last year) and its after-tax income in 1959 was an agreeable 5.25% of sales. Its long-term debt of \$6-million has a comfortable payout stretching to 1973, and the company isn't using any bank credit to speak of.

This year's first-half results surprised even Johnson. Sales of \$44.8million, up 35% from a somewhat sluggish first half in 1959, returned net profit of \$2.8-million, up 94%. You can trace some of this spectacular rise in profit to the fact that Friden is over the hump with the new sales and service organization it had to assemble and train for its integrated data processing systems. But there's also a hint that Friden has found a way to control the cost erosion that, in so many corporations, accompanies rising volume. Johnson looks for volume to reach \$88-million to \$90-million this year.

· Charmed Circle-Johnson is not consciously grooming a successor, although he admits he is watching the younger men around him. Among them are Vice-Pres. Philip R. Samwell, general manager; Vice-Pres. Robert E. Busher, general sales manager; and Vice-Pres. Dunstan S. Gross, head of re-search and development. Vice-Chmn. Charles R. Ogsbury, who was president of Commercial Controls, and Vice-Pres. Russell D. Shaver, Jr., who headed International Postal Supply, probably are members of the charmed circle also.

A bit sadly, Johnson concedes that his successor, whoever he may be, will probably scrap his method of personal management and hustle up an organization chart with little squares and connecting lines.

"But I have no thought of retiring," he adds brightly. "And besides, when we're twice as big as we are now, maybe we'll need a chart." END

DIRECT MAIL ADVERTISING CASE HISTORY NO. 1

Humorous mailings on 5 by 7 cards, addressed to purchasing agents and engineers in electronics and avia-tion, pulled 12% return for an electric company. Write for free booklet, "The VIP Series." It's full of success stories.

DMCP ASSOCIATES, INC.

Executives, Multiply your productive time...participate in all necessary meetings without leaving your office. Conference Room Intercom Television

Industrial Products Division
SAN FERNANDO, CALIFORNIA - EMPIRE 7-6161



the nicest things happen to people who carry FIRST NATIONAL CITY BANK TRAVELERS CHECKS



342,000 PRIME CUSTOMERS ... the management men who subscribe to Business Week. Business Week reaches across all business and industry. It offers you more management readers per advertising dollar than any other magazine in its field, according to readership studies by advertisers themselves.

BUSINESS WEEK

A McGraw-Hill Magazine





BUSINESS WEEK



Member Magazine Publishers Association

Index of Advertisers in the September 3, 1960 Issue

Agency—Fuller & Smith & Ross, Inc.	GENERAL FIREPROOFING CO3rd Cover Agency—The Griswold-Eshleman Co.	PITTSBURGH CHEMICAL CORP
ALUMINUM CO. OF AMERICA	GENERAL MOTORS CORP., (ELECTRO- MOTIVE DIV.)	RECORDAK CORP., (SUB. OF EASTMAN KODAK) Asency—J. Walter Thompson Co.
AMERICAN CONCERTONE INC., DIV. OF ASTRO-SCIENCE CORP	THE GENERAL TIRE & RUBBER CO CHEMICAL DIV. Agency-D'Airy Adv. Co.	ROYAL METAL MFG. CO
AMERICAN MUTUAL LIABILITY INSURANCE CO	GLOBE-WERNICKE CO	RYDER SYSTEM, INC
AMERICAN TELEPHONE & TELEGRAPH CO	B. F. GOODRICH CO	SOUTH CAROLINA DEV. BOARD
AMERICAN VISCOSE CORP	GOODYEAR TIRE & RUBBER CO4th Cover Agency-Kudner Agency, Inc.	STEEL SERVICE CENTER INSTITUTE, INC. 95 Agency—Fuller & Smith & Ross Inc.
ASSN. OF AMERICAN RAILROADS 86 Agency—Renton & Bowles, Inc.	HANDY & HARMAN	SYLVANIA ELECTRIC PRODUCTS, INC., .48-49 Agency—Kudner Agency, Inc.
BANKERS TRUST CO 3 Agency—Donahue & Coe, Inc.	Agency—Virgil Lynch Assoc.	TELETYPE CORP
BOOTHE LEASING CORP	Agency-Fuller & Mnith & Ross, Inc.	TEXAS POWER & LIGHT CO
Holden, Inc. BOWER ROLLER BEARING DIV., FEDERAL-MOGUL-BOWER BEARINGS	HERTZ SYSTEM. INC	TINNERMAN PRODUCTS, INC
INC	HYDROWAY SCALES, INC	TOWMOTOR CORP
CHARLES BRUNING CO., INC	INTERNATIONAL BUSINESS MACHINES CORP	UNION TANK CAR CO
CATERPILLAR TRACTOR CO., ENGINE DIV. 73 Agency-N. W. Ayer & Son, Inc.	Agency—Ogilvy, Benson & Mather, Inc.	WEBER MARKING SYSTEMS, INC 44 Agency-Boche, Richard & Cleary, Inc.
CHAMPION PAPER & FIBRE CO 5a Agency—Campbell-Ewald Co.	INTERNATIONAL TELEPHONE & TELEGRAPH CORP	WEBSTER ELECTRIC CO
CHICAGO BRIDGE & IRON CO 83 Agency—Russell T. Gray, Inc.	INTERSTATE SYSTEM	WESTERN UNION TELEGRAPH CO 71 Agency-Benton & Bowles, Inc.
C.I.T. CORP	JENKINS BROS 38 Agency—Darrell Prutzman Assoc.	WEYERHAEUSER CO
CLUPAK, INC	JESSOP STEEL CO	ADVERTISING BALES STAFF
COMBUSTION ENGINEERING, INC10-11 Agency—G. M. Hasford Co.	Agency—Friedman Inc. 78	Midwestern Advertising Sales Manager William C. Bradford—Chicage Eastern Advertising Sales Manager R. Bernard Alexander—New York
CONTINENTAL CAN CO	Agency-Klau-Van Pietersom-Dunlap, Inc.	Atlanta S Douglas C. Billian, 134 Peachtree St., N. W. Jackson 3-6951 Besten 16 Kant Benger, Park Square Bidg., Hubbard 2-7169
DENVER CHICAGO TRUCKING CO., INC 78 Agency—Galen E. Broyles Co., Inc.	McGRAW-HILL BOOK CO., INC186	Chicago 11 Herbert M. Higgins, William F. Holbrook, James E. McShane, Robert Sidur, 520
OMCP ASSOC	MONSANTO CHEMICAL CO. (PLASTICS DIV.) Agency—Needham, Louis & Brorby, Inc.	N. Michigan Ave., Mohawk 4-5800 Cieveland 13
E. I. DUPONT DE NEMOURS & CO79, 91 Agency—Batten, Barton, Durstine & Osborn, Inc.	THE NATIONAL MACHINERY CO 78 Agency-J. H., Bunting	Denver 2John W. Patten, 1700 Broadway, Alpine 5-2981 Detreit 28G. Robert Griswold, Richard J. Mc- Gurk, Penobscot Bldg., Woodward 2-1793
EMPLOYERS MUTUALS OF WAUSAU 4 Agency—J. Walter Thompson Co.	NATIONAL TRUCK LEASING SYSTEM118 Agency-W. S. Kirkland	Heusten 25
THE FAFNIR BEARING CO	NORFOLK & WESTERN RAILWAY CO 68 Agency-Houck & Co., Inc.	Sixth St., Huntley 2-5450 Minnespells 2 Richard C. Thompson, 130 South Sixth St., Federal 3-7425 New York 36 Harold E. Choate, Fred R. Emerson, John H. Glover, John F. Juraschek, Francis F. McAdama, R. A. McNaughton, John H. Stevenson, John C. White, Jr., 560 5th Ava.
FARRINGTON ELECTRONICS, ING104 Agency—N. W. Ayer & Son, Inc.	OHIO FARMER	F. McAdams, B. A. McNaughton, John H. Stevenson, John C. White, Jr., 590 5th Ava., Oxford 5-5959 Philadelphia 3. William L. Blanchard, James T.
FIRST NATIONAL CITY BANK OF NEW YORK	OLIN MATHIESON CHEMICAL CORP., METALS DIV	Oxford 5-5959 Philadelphia 3. William L. Blanchard, James T. Hauptil, 8tx Penn Center Piaza, Locust 8-4230 Pittsburgh 22 John R. Thomas, Four Gateway Center, Express 1-1314 8t. Leuis 3 John F. Boomer, 3615 Olive St., Jefferson 5-4867
FRUEHAUF TRAILER CO	OZALID DIV. (GENERAL ANILINE & FILM CORP.)	wan riministed williams with Ottobasti, to a controll
GENERAL AMERICAN TRANSPORTATION CORP	PEABODY COAL CO	Douglas 2-400 Lenden

Time to Stimulate the Economy

As the story on page 30 makes clear, there's apprehension among professional economists that we may be on the verge of a recession.

To be sure, a number of economists think that we have been going through a substantial readjustment this year. Indeed, if you look at the Business Week index, you get the picture of an economy that reached its peak back in February and has been sliding off since. Much of the drop has come as the rate of inventory accumulation came down (page 74). Some economists think we already have most of the pain behind us and that any further readjustment is likely to be mild and short-lived. They look for easier monetary policy and a faster rate of government spending to help push us forward in 1961.

Other economists think we are at the beginning, not at the end, of our troubles. They fear the concurrence of cuts in capital spending, of inventory liquidation, and of the possibility of a rise in unemployment, which is already above 5%.

Some of these people have a new worry that makes them fear that another recession might be more serious than its predecessors.

That new worry is housing. In the past, housing has played a powerful role in offsetting downswings in the rest of the economy. Once the government made money available and lowered the interest rates, the backlog of demand for housing was strong enough to produce a swift boost in construction.

This may happen again. But there are at least a few reasons for fearing that it may not: One is that we are in the years of the "hollow generation"—at least two or three years away from the time when the big postwar baby crop begins to reach marital age and swell the demand for housing. The other reason is that builders may have been putting up the wrong kind of houses. In rental housing, vacancy rates nationally have reached 7.3%—a postwar high.

There's always the temptation to look away from worrisome possibilities—particularly as long as they remain only possibilities. But a stiff upper lip and a cheerful whistle in the dark never cured the business cycle.

There is also the other possibility—that we will see nothing worse than a period of slow growth ahead. But the implications for government monetary and fiscal policy today are perfectly clear. Inflationary dangers have greatly abated; dangers of recession have markedly increased. Therefore, the government must aim to stimulate the economy—to forestall the possibility of serious recession and to start the economy growing vigorously as soon as possible.

The Federal Reserve can be commended for

anticipating the softness in the economy and for acting on its forecast. There is, however, a question whether it has acted decisively enough—and, perhaps even more important, in the appropriate way. By open market purchase of bills, it has succeeded in forcing short-term rates down, but long-term rates—including mortgage rates—are still too high.

The main effect of forcing down short-term interest rates has been to accelerate the movement of short-term money out of the country. This aggravates our balance of payments problem and the drain on gold, but does little to stimulate business activity. However, if we want to stimulate business investment and consumer spending on housing, it's the long-term rates that must come down.

At the same time, the government should accelerate the flow of contracts and expenditures for national defense work and for public construction. We will run the risk of a deficit by accelerating expenditures planned for the long haul. But this should keep the economy closer to full employment. The deficit, if there is one, will be small compared with that resulting from a recession. The sharp but short decline of 1957-58 put the government \$13-billion in the red in fiscal 1959.

The risks to the U. S. international financial position of another lurch toward recession and massive deficits cannot be dismissed lightly. Wise policy now is to make any coming recession as moderate as possible—or to forestall it altogether, if we can

Cold Comfort

In faraway, frigid Antarctica, the U.S. and Soviet Union may find common ground for peaceful cooperation. The Senate has ratified a 12-nation treaty that will shelve conflicting territorial claims, and Russia is expected to add its signature soon.

Though twice the size of the U.S. and a continent staked out by famed explorers, the Antarctic until recently could boast little more than a huge penguin population and the world's lowest recorded temperature (-125.3F).

Since the start of the International Geophysical Year in 1957, the U.S. and Rusia have been investing time, money, and lives in Antarctic research. Smaller nations, too, have feared that the remote area might become a missile base for the two great powers.

It is a sign of maturity in our dealings with Russia that we took the first steps toward an Antarctic Treaty. It may be small consolation for those who hope for a broad solution of East-West differences. But the treaty will help eliminate a potential point of dispute, and may even set a pattern for coping with the crucial area of satellite-filled outer space.

Bird's-eye view of an executive's world



for ion eray. ded rm gh. inent grathe ess iess it's

for ion. ting this ent. ared but \$13-

sive sive olicy rate n.

oviet oopeaty and

conrctic nuge rded

sical

vest-

arch.

note

reat

ıssia

rctic who

nces.

point

ping pace.

1960

Not every executive works in a world like this, of course. But more and more do... as top management discovers the plus benefits of offices functionally-styled and equipped by GF. For example, above you see the handsome Mode-Maker desk, specially styled by GF to lend quiet good taste to the private office. It's complemented by the comfort of GF Goodform aluminum chairs, built to retain their good looks for a lifetime. And only GF offers you complete planning, design and decorator services ... for private or general offices. Just call your GF branch or dealer, or write The General Fireproofing Company, Dept. B-41. Youngstown 1, Ohio.

Whether you're planning new offices or major remodeling, it will pay you to consult GF Business Work Center specialists at the time you hire your architect.



Visit us at the OEMI BUSINESS EQUIPMENT EXPOSITION . Los Angeles Sports Arena . November 1-4

STORAGE COLLECTION

Stirring up snowstorms in the sunny South is an unlikely job for hose experts. But

GOOD FYEAR

when this famous Southern resort decided to put in a ski slope, the G.T.M.—Goodyear Technical Man—got the call. The problem he was handed: supply foolproof, flexible links between the big artificial snow-maker and its 50 mov-

able "sprinklers." Hose, if used, had to be capable of handling relatively high pressures—remain flexible despite freezing temperatures — take plenty of rough handling yet give long service. The G.T.M.'s answer: 6,000 feet of special 11/4" Goodyear hose, which helps generate man-made blizzards, covering the entire slope with a fresh 4-inch blanket within a few hours.



Lots of good things come from

B Vertically braided rayon cord reinforcement for strength with flexibility

C Smooth, soft, abrasion-resistant cover

GOOD YEAR

involving industrial rubber products—Conveyor Belts, V-Belts and the rest. To obtain their help, just look under "Rubber Goods" or

"Rubber Products" in the Yellow Pages. Or write Goodyear,

Industrial Products Division, Akron 16, Ohio.

INDUSTRIAL PRODUCTS

